Environmental Assessment

Hotchkiss Substation to Spring Creek Tap 115kV Transmission Line Project

June 2006

TRI-STATE
Generation and Transmission Association, Inc.
A Touchstone Energy® Cooperative

Environmental Assessment

Hotchkiss Substation to Spring Creek Tap 115kV Transmission Line Project CO-150-2005-27 - COC-68283

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1.1 Introduction

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality (CEQ) Guidelines (40 Code of Federal Regulations 1500-1508) and the U.S. Department of Interior, Bureau of Land Management's (BLM) Handbook (H1790-1). The EA addresses the authorization of the Hotchkiss Substation to Spring Creek Tap 115 kilo-volt (kV) transmission line and access roads (proposed action) under the Federal Land Policy and Management Act of 1976 (FLPMA). The existing transmission line is located in Delta and Montrose Counties, Colorado, and is owned and operated by Tri-State Generation and Transmission Association, Inc. (Tri-State). Tri-State's 115kV transmission line is approximately 29 miles in length, and crosses private land for 16.9 miles and public land managed by the BLM for 12.1 miles. This EA addresses the authorization of the transmission line and access roads under FLPMA across public lands administered by the BLM's Uncompahgre Field Office. Private lands traversed by the transmission line are also considered.

Private land easements and public land authorizations were originally acquired when the transmission line was constructed in 1968. The width of the easements and public lands authorization is 100 feet. The BLM right-of-way (ROW) grant was issued under the Act of March 4, 1911 and assigned Serial # COC-1534 (the ROW Grant). The ROW Grant was issued August 2, 1967 and expires August 1, 2017.

The authorization of the 115kV transmission line and access roads across public lands is being considered at this time in accordance with the provisions of the Gunnison Gorge National Conservation Area (NCA) Approved Resource Management Plan (RMP) and Record of Decision (ROD) (November 2004). The new ROW Grant would include authorization of all necessary access roads, and transmission line maintenance requirements to properly administer the facility. The BLM has stated in the NCA-RMP *"The BLM would cooperate with Tri-State to match the terms and conditions of the existing 115 kV ROW C-1534 and those accompanying the easement, where possible, such that consistent operation, maintenance, and upgrading activities could be conducted on the line regardless of the location on public lands."* (BLM, January 2004, Proposed RMP and Final EIS, pg. 4-69)

This EA describes and evaluates the proposed action according to Tri-State's Plan of Development (POD). The EA documents the need for the proposed action, the Affected Environment, and Environmental Consequences of authorizing the existing transmission line and access roads under FLPMA. The No Action Alternative is also addressed.

Tri-State is a wholesale electric power producer/supplier that serves 44 rural electric cooperatives and public power districts in Colorado, Nebraska, New Mexico, and Wyoming. Tri State's member distribution systems serve over 500,000 metered customers. Tri-State's mission is to provide efficient, cost-effective power to its members.

Tri-State owns and operates the Hotchkiss Substation to Spring Creek Tap 115kV transmission line, which provides a portion of the electric power to the Uncompahgre Valley and surrounding areas. The transmission line is primarily supported on H-frame wood pole structures. Existing

hardware consists of three electrical conductors, insulators, and two shield wires for lightning protection. A number of three pole dead-end structures are also in place that provide additional strength to the transmission line and prevent cascading of poles in the event of a catastrophic failure.

Access to the transmission line is via existing roads and trails (access roads). Forty-five (45) miles of access roads are used to service the transmission line. In total, there are 18.3 miles of access roads on public land and 26.7 miles of roads on private land. All access roads across public land would be authorized in the ROW Grant. The access roads generally parallel the transmission line; however, some road segments deviate from the transmission line due to terrain conditions (canyon crossings, steep hillsides, rock cliffs, etc.). Access to the transmission line across private land is provided in easement documents, which generally allow the construction and use of roads where required.

Since construction of the transmission line in 1968, two administrative actions have taken place that affect the transmission line and the access roads located on BLM land. The first action concerns a large parcel of land (approximately 7,100 acres), which was privately owned at the time the transmission line was constructed. While in private ownership, an easement for the transmission line was granted across this property that included rights of access. Through a series of subsequent actions the property, with the easement in place, was acquired by the BLM. The second action concerns the passage by Congress of the Black Canyon of the Gunnison National Park and Gunnison Gorge National Conservation Area Act of 1999 (1999 Act), and the Black Canyon of the Gunnison Boundary Revision Act of 2003 (Revision Act of 2003). The 1999 Act included most of the BLM land in the project area. The Revision Act of 2003 also incorporated into the NCA the 7,100 acres of BLM land that had previously been under private ownership when the transmission line was constructed.

One of the provisions of the 1999 Act directed the BLM to prepare an RMP for the public lands inside the boundary of the newly created Gunnison Gorge NCA. The RMP addresses both the NCA and adjacent BLM lands in the immediate area of the NCA. As such, the RMP addresses almost all of the BLM land that is traversed by the transmission line. In order to ensure that the rights granted in the original easement across the privately owned property and the rights granted in the ROW Grant are preserved, Tri-State initiated consultation with the BLM in 2004. Agreement was reached that Tri-State would apply for authorization of the transmission line and access roads under FLPMA. FLPMA is the current authority under which the BLM authorizes electric transmission lines across public lands.

1.2 Description of the Proposed Action

The proposed action is the issuance of a ROW Grant for the existing transmission line and access roads, under the terms and conditions of FLPMA. The proposed ROW Grant will replace the existing ROW Grant and easement that is currently in place. The new ROW Grant will be 100 feet wide for the transmission line, and 30- to 50-feet wide for the access roads. The new BLM ROW Grant will bring all of the legal authorizations on BLM land under the umbrella of one document. This action is the result of recent congressional legislation that designated the NCA, and resulted in the RMP for public lands crossed by the transmission line. As described in Section 1.1, land ownership in the NCA has changed since the transmission line was constructed. Therefore, the continuation of the existing ROW Grant and easements are not consistent with current management goals described in the BLM's RMPs for public lands crossed by the

transmission line. Table 1.2-1 summarizes the quantity of BLM land affected by the authorization of the proposed action.

Table 1.2-1 Summary of Proposed ROW Grant for Transmission Line and Access Roads Across Public Lands

	Transmission Line	Access Roads	Total
Length (Miles)	12.1	18.3	
Width (Ft.)	100 ft.	30 ft.	
Total Square Feet.	6,388,800	2,898,720	
Total Acres	146.67	66.55	**213.22**

Source: View Point West, 2005.

The proposed action is described in detail in the POD document. The POD is incorporated herein by reference, and provides a description of the activities and Environmental Protection Measures (EPMs) that Tri-State will use to operate and maintain the transmission line. The POD serves as the framework for ensuring that the existing 115kV transmission line is maintained in accordance with both utility industry practices and standards and the BLM's Management Plans. Applicable BLM plans include the Gunnison Gorge NCA RMP (November 2004) and the Uncompahgre Basin RMP (1986). The following is a summary of the activities that will or may take place during the operation and maintenance of the transmission line.

Private Land Easements. There will be no changes to any of the existing easements on private land. Those easements will remain as is.

Annual Inspections. To ensure the safety and reliability of the transmission line, Tri-State will continue to conduct annual on-the-ground and aerial visual inspections of the transmission line, including the conductors, insulators, supporting structures, hardware, shield wires, ground wires, guy wires, anchors, and right of way. On-the-ground inspections involve the use of 4-wheel drive pickup trucks and all-terrain vehicles ("ATV's"). Aerial inspections are conducted from a helicopter. If maintenance or replacements of the insulators, hardware or shield wires are needed, large bucket and boom trucks will be used to access the transmission line.

Maintenance Activities. Constructed in 1968, the transmission line will most likely require increasing maintenance in the future to ensure that the transmission line meets or exceeds a typical 50-year life span. Replacement of poles, hardware, and conductors may be necessary in the future given the age of the transmission line, and normal rates of deterioration of wood poles and hardware. If supporting structures need to be replaced (poles, guy wires, anchors), additional equipment will be required. This equipment may include crew trucks, a pole trailer, backhoes, crane, digger, a medium-sized crawler tractor, and a truck or equipment trailer to carry supplies for the repair or replacement. It may also be necessary to replace and re-sag the conductors.

Figure 1 illustrates the existing H-frame structure design that predominantly supports the 115kV circuit.

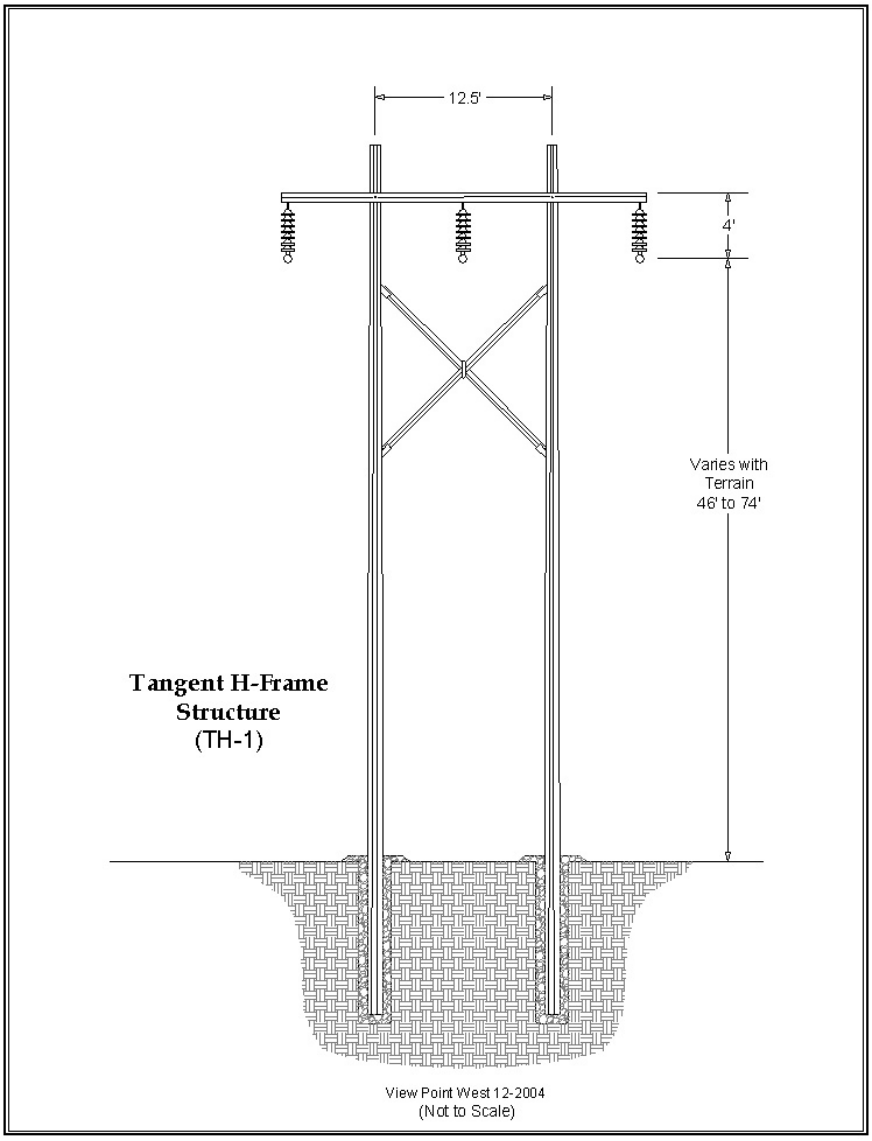

Figure 1 – Typical 115kV H-frame Wood Pole Structure

New Dead-end Structures. In order to improve the reliability of the transmission line, it may be necessary in the future to construct additional dead-end structures. Dead-end structures are three pole wood structures designed to prevent cascading of the transmission line during catastrophic events. These structure types are also used for added stability at angle points and river crossings.

Figure 2 shows the three-pole structure design that is currently in place for the transmission line (e.g. three pole structures are currently in place at the Gunnison River crossing). If necessary, additional dead-end structures and access roads would be installed intermittently at distances no greater than approximately 5 miles apart. New dead-end structures would be similar in height and design to the current structures. New three pole structures would be installed along the same centerline as the existing structures. All new structures would be placed to avoid or minimize impacts to sensitive resources, including special status plants and wildlife species and cultural resources to the extent feasible.

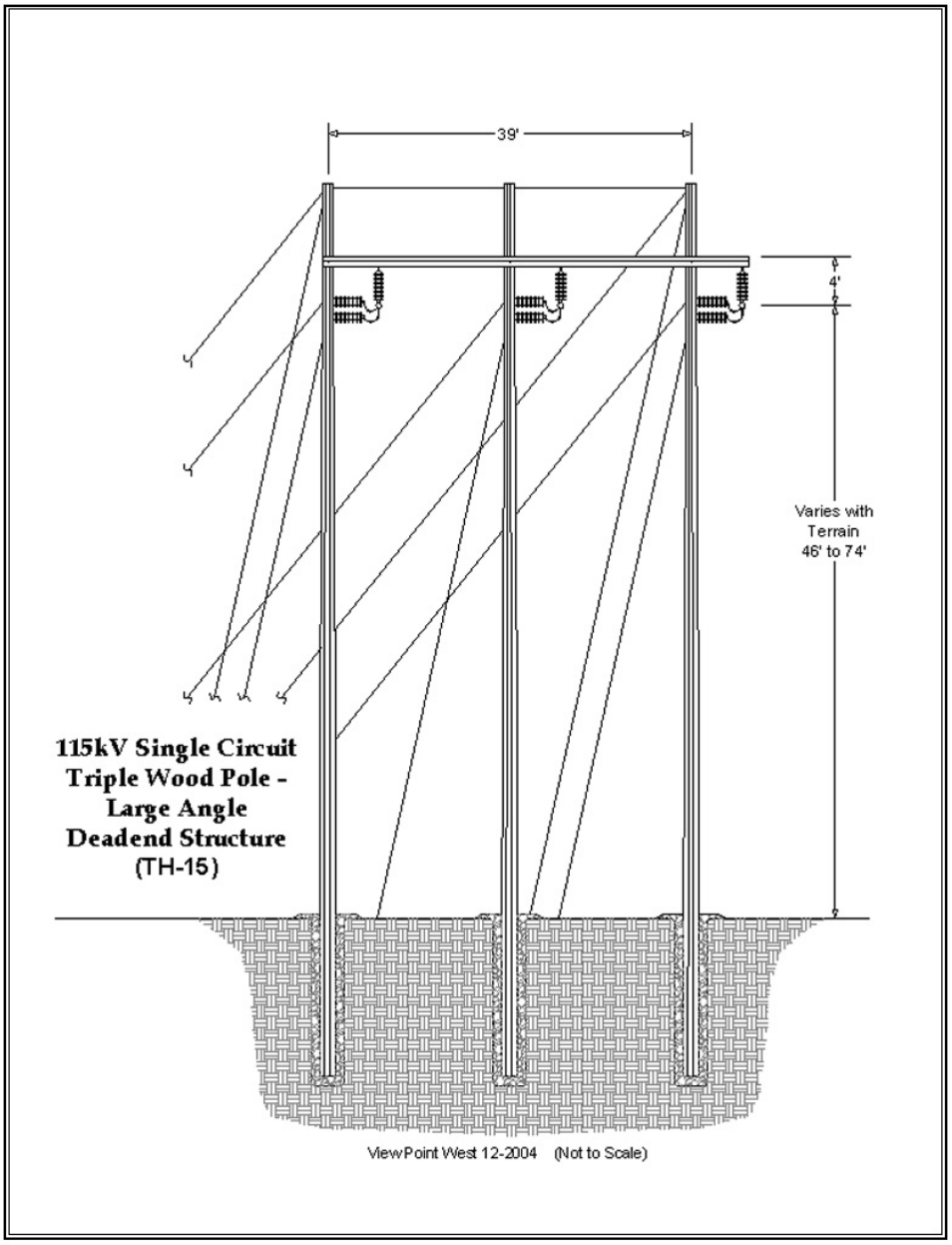

Figure 2 – Typical 115kV Three pole Dead-end Wood Structure

Transmission Line Uprate. In order to meet Tri-State's customers' needs, the 115kV transmission line may also be uprated sometime in the future. The uprating of the transmission line could entail making changes to the lines and/or structures to increase the amount of power that can be transmitted over 115kV conductor. Uprating may or may not involve installing new conductor. If new conductor is required, there would be no increase in the number of conductors; however, the diameter of the conductor would increase from 0.783 inch to 1.108 inch. Uprating may also require increasing the overall height of the existing structures up to 20 feet, in order to provide adequate ground clearances. If required, the structures would be modified by one of two means: 1) either raising the structure cross arms, or 2) raising the entire structure with steel trusses near the base. If a structure could not be raised sufficiently to meet necessary electrical clearances, then an intermediate structure would be added. A thermal uprate would require the

same type of construction equipment as previously described, as well as additional stringing equipment. The uprate process would take place entirely within the boundaries of the authorized ROW. The three pole structures at the Gunnison River Crossing are expected to be sufficient for an uprate. If it is determined that these structures require replacement in the future, Tri-State would install new wood pole structures of the same design. Detailed engineering would be required to determine where and how many additional new structures may be necessary.

Figure 3 illustrates the two options for extending the height of the existing 115kV H-frame structures, if required for uprating in the future.

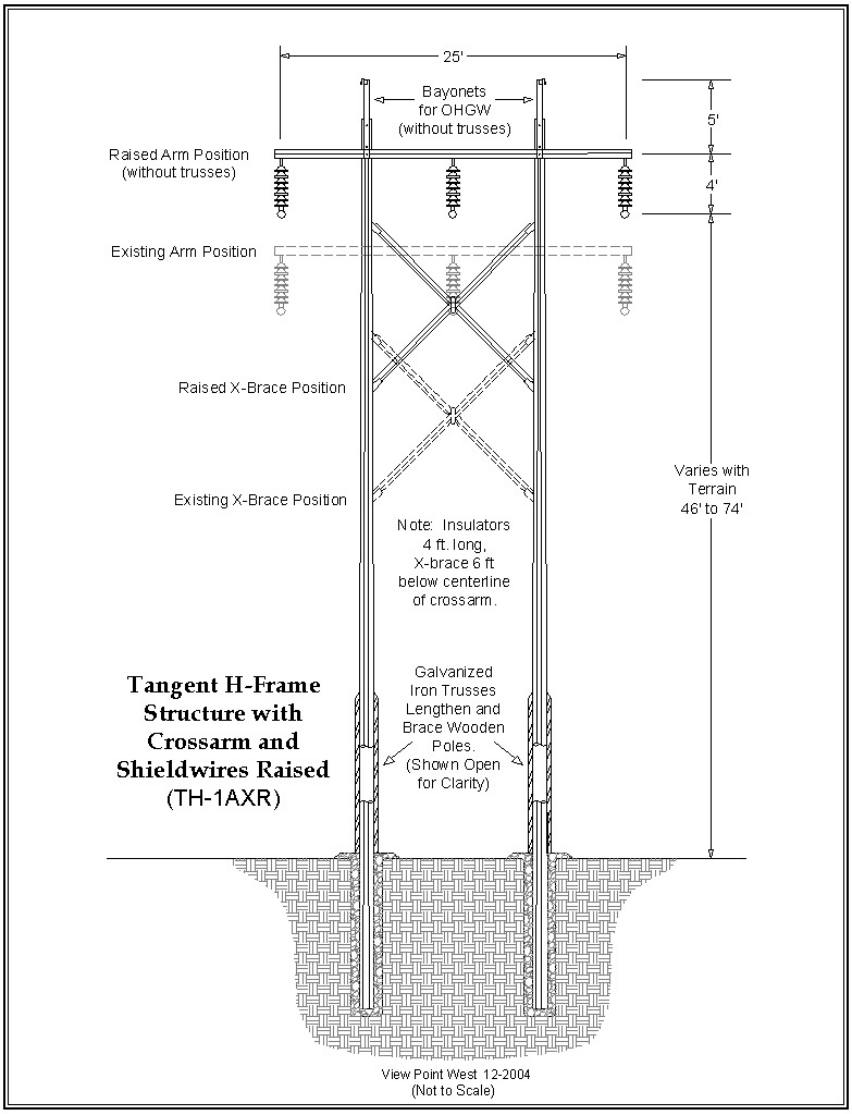

Figure 3 – Typical 115kV Uprate Structure Modification Options

Access Road Maintenance. During the POD development, Tri-State evaluated all access roads in the field and classified them based on their existing condition. These interim classifications are shown on the EA Map Exhibits (back of report) and POD maps to illustrate where access roads need to be improved to bring them to a satisfactory condition (i.e. Maintenance Level 1). The

goal is to establish and maintain each access road at a Maintenance Leve1 1 condition. The road classifications are defined as follows:

- **Maintenance Level 1** – No maintenance required; road is currently in satisfactory condition and presents no access problems for Tri-State maintenance equipment (This is the Tri-State standard for transmission line access roads).

- **Maintenance Level 2** – Road surface is currently in satisfactory condition, however, roadside vegetation must be trimmed, using hand-held equipment on public lands, to bring it to Level 1 standard (No Maintenance Level 2 roads are currently present on public lands administered by the BLM).

- **Maintenance Level 3** – Road is currently in poor but passable condition. Minor, localized road grading and/or vegetative clearing is required to bring it to Level 1 standard.

- **Maintenance Level 4** – Road is currently in poor condition. Heavy roadway grading and/or vegetative clearing is required to bring it to Level 1 standard.

- **Maintenance Level 5** – Road is currently impassable; access is not feasible for Tri-State maintenance equipment. Extensive grading work and associated vegetative clearing is required (No Maintenance Level 5 roads are currently present on public lands administered by BLM).

Table 1.2-2 summarizes the maintenance levels for access roads across public and privately owned lands.

Table 1.2-2 Summary of Access Road Maintenance Levels by Land Ownership

Maintenance Level	BLM Land (Miles)	Private Land (Miles)	Total (Miles)	Percentage (%) of Total Maintenance
1	14.82	25.04	39.86	88.58
2	0	.04	.04	.09
3	3.14	1.28	4.42	9.82
4	.30	.15	.45	1.00
5	0	.23	.23	.51
Totals	**18.26**	**26.74**	**45.00**	**100.00**

Source: Mountain West Land Services, 2004.

Access roads will be used for routine maintenance and repairs and during emergency electrical outages. Emergency outages may be caused by lightning strikes, high winds, vandalism, or equipment failure. Tri-State will maintain the access roads on public lands in a satisfactory condition to enable the safe passage of line maintenance vehicles and equipment to each transmission structure. Large bucket and boom trucks may need to access each of the structure sites. Since bucket and boom trucks have a higher than average center of gravity, access roads must be level or flat (5% or less side-to-side grade) for safe passage. A level area is also needed near each structure in order to stabilize a bucket truck with outriggers. The road bed will be used for stabilizing this equipment in most cases; however, a pad may need to be leveled at some structure sites, depending on terrain and vegetation conditions. If construction of a level pad is required, a backhoe or crawler tractor will be used.

Vegetation along the access roads will be trimmed, if necessary, to allow safe passage of the trucks and equipment. Vegetation trimming will typically be performed with hand-held equipment. Trimming along the transmission line and access roads is anticipated to be minimal since existing vegetation is predominantly shrub and grassland communities.

Environmental Protection Measures (EPMs). In order to ensure that the operation and maintenance of the existing 115kV transmission line and access roads is consistent with the management plans and objectives of BLM's approved RMPs, Tri-State has adopted a number of EPMs that would be implemented as part of the POD. These EPMs are listed on Table 1.2-3 and are part of the proposed action.

Table 1.2-3 Environmental Protection Measures (EPMs)	
EPM No.	**Description**
1	**Authorized Activities**: All activities associated with the operation and maintenance of the Hotchkiss Substation to Spring Creek Tap 115kV transmission line and access roads will take place within the authorized limits of the ROW Grant. Additional access roads or cross-country travel will not be allowed outside of the ROW Grant for the transmission line and access roads without prior review and approval by the BLM.
2	**Training - ROW Grant:** Tri-State and its contractors will inform their employees about activities permitted within the authorized ROW for the transmission line and access roads. As part of this measure, Tri-State will provide contractors and employees copies of these Environmental Protection Measures and POD maps showing allowable activities and access road maintenance levels.
3	**Training - Regulatory:** Tri-State and its contractors will inform their employees about relevant federal and state regulations intended to protect cultural resources and special status biological resources. Training will include an explanation of the need to avoid known resource sites, cease work when previously undiscovered cultural resource items are encountered and the possibility of prosecution for removal of such items and/or damage to archaeological sites.
4	**Transmission Line ROW:** The ROW Grant is 100 feet wide for the transmission line. The ROW Grant allows Tri-State to perform maintenance activities within a 50-foot radius of each structure.
5	**Access Road ROWs and Maintenance Levels:** The ROW Grant for access roads is 30 feet in width for all roads identified as Maintenance Levels 1, 2, and 3. The ROW Grant for Maintenance Level 4 roads is 30 feet in width, except where side slopes exceed 30%. In these limited cases, the ROW Grant for Maintenance Level 4 access roads is 50 feet in width. The ROW Grant for access road widths pertains to all access roads on public lands, including roads located within the 100 foot-wide transmission line ROW. Tri-State will maintain the access roads on public lands as shown on the POD maps in a satisfactory condition that enables safe passage of line maintenance vehicles and equipment to each transmission structure. During the POD development, Tri-State evaluated all access roads in the field and classified them based on their existing condition. These interim classifications are shown on the POD maps to illustrate where access roads need to be improved to bring them to a satisfactory condition (i.e. Maintenance Level 1). The goal is to establish and maintain each access road to a Maintenance Leve1 1 condition. The road classifications are defined as follows: **Maintenance Level 1** – No maintenance required; road is currently in satisfactory condition and presents no access problems for Tri-State maintenance equipment (This is the Tri-State standard for transmission line access roads). **Maintenance Level 2** – Road surface is currently in satisfactory condition, however, roadside vegetation must be trimmed, using hand-held equipment on public lands, to bring it to Level I standard (No Maintenance Level 2 are currently present on public lands administered by the BLM). **Maintenance Level 3** – Road is currently in poor but passable condition. Minor, localized road grading and/or vegetative clearing is required to bring it to Level 1 standard. **Maintenance Level 4** – Road is currently in poor condition. Heavy roadway grading and/or vegetative clearing is required to bring it to Level 1 standard. **Maintenance Level 5** – Road is currently impassable; access is not feasible for Tri-State maintenance equipment. Extensive grading work and associated vegetative clearing is required. (No Maintenance Level 5 roads are currently present on public lands administered by BLM).

Table 1.2-3 Environmental Protection Measures (EPMs)	
EPM No.	**Description**
6	**Access Road Maintenance:** All access roads will be maintained to provide a well-drained roadway by water barring, maintaining drainage, and any additional measures necessary to minimize erosion and other damage to the access roads or the surrounding public lands.
7	**Access Road Maintenance - Scheduling:** Routine access road maintenance will occur during the dryer summer and autumn months. No routine surface disturbing activities will occur from March 1 through May 31 if necessary to protect wet soils. No construction or routine maintenance activities will be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 4 inches deep, the soil shall be deemed too wet to adequately support construction equipment. If emergency line maintenance is required during the winter or spring months, care will be taken to minimize erosion and sedimentation. This may involve the temporary installation of culverts and the use of flow diversion structures and sediment traps (straw bale dikes, sediment filter fabric, etc.) below maintenance areas to trap sediment.
8	**Access Road Maintenance - Soil and Vegetation Disturbance:** Only the minimum amount of soils and vegetation necessary for the maintenance of the access roads and the transmission line will be disturbed. If excavation is necessary, topsoil will be conserved and reused as cover on disturbed areas to facilitate re-growth of vegetation. Vegetation will only be cleared from those areas necessary to obtain adequate working width and turning radius space for maintenance equipment. The following procedures will be followed in clearing vegetation: 1) encroaching vegetation will be cut off at the base by either a chainsaw (Maintenance Level 2 and 3) or a bulldozer (Maintenance Level 4); 2) cut trees will be reduced in a wood chipper machine and broadcast on either side of the ROW. For Level 3 and 4 access roads, bladed materials will be kept in the road driving surface with no side casting. Road cuts will be stabilized and reseeded as directed by BLM.
9	**Access Road Maintenance - Water Bars:** Water bars on the access roads will be maintained and/or constructed according to the spacing and cross sections specified by the authorized officer. Water bars are to be constructed to: 1) simulate the imaginary contour lines of the slope (ideally with a grade of 1 to 2 percent); 2) drain away from the disturbed area; and 3) begin and end in vegetation or rock whenever possible. Many of the water bars that were established during the initial construction of the transmission line are still in place. These water bars will be maintained on an as needed basis.
10	**Emergency Maintenance/Access:** If emergency access to the transmission line is required during wet weather, if pole replacement or other maintenance activities result in the removal of vegetation, or if substantial vehicle impacts occur to existing native vegetation, the disturbed areas will be seeded with Bottlebrush Squirreltail (3lbs/acre) and Western Wheatgrass (1.6 lbs/acre) of certified pure live and weed free seed to be broadcast and raked in. Reclamation and revegetation will be implemented as required, as soon as practical after any emergency road access or maintenance work needed to repair the transmission line.
11	**Public Access:** The ROW access roads will be open to free and unrestricted public access for all lawful purposes except in those areas identified by the authorized officer. Tri-State will work with BLM to restrict access if determined necessary by BLM in the future.
12	**Transmission Line Uprate - Increasing Existing Structure Heights:** If Tri-State determines it is necessary in the future to uprate the 115kV transmission line**,** the height of the existing structures will not be increased more than 20 feet without prior approval of the BLM. Structures will be increased either by raising the structure cross arms or raising the entire structure with steel trusses near the base.
13	**Transmission Line Uprate - Additional Structures:** If Tri-State determines additional structures are needed for stability or uprate purposes in the future, the new structures will be located along the transmission line centerline. Access to the new structures will be provided by the existing access roads, or via new spur roads. If spur roads are required, they will be located within the 100-foot wide transmission line ROW, and be maintained as Level 1 or Level 2. If new access roads are required either outside the ROW Grant, or at Maintenance Levels 3, 4 or 5, Tri-State will obtain additional authorization from BLM for these actions.

Table 1.2-3 Environmental Protection Measures (EPMs)	
EPM No.	**Description**
14	**Cultural Resources - Protection of Known Sites:** In areas of sensitive cultural resources, a qualified archaeologist will mark, flag, stake, or fence as appropriate, cultural sites prior to access road improvements being made (Maintenance Levels 3 and 4) and prior to any surface disturbance activities (e.g. installation of new poles, pole replacements, etc.). The sites will be marked/flagged for avoidance immediately before maintenance/construction activities, and the marking/flagging will be removed immediately after maintenance/construction is completed. Construction and maintenance personnel will be trained to recognize the markers and understand the equipment movement restrictions involved. Management actions within the non-contributing portion of the site south of Rabbit Gulch will be restricted to existing access roads and the transmission structure pads. The north side of Rabbit Gulch will be avoided.
15	**Cultural and Paleontological Resources - Inadvertent Discovery:** If any cultural resources are inadvertently unearthed or otherwise encountered during maintenance activities, work will cease in the area of the discovery until the resources can be identified and appropriate resource protection measures can be implemented. If located on public land, Tri-State will notify the appropriate land management agency officials. If located on private land, Tri-State will contract a permitted archaeological consulting firm, who will ensure consultation with the Colorado State Historic Preservation Office.
16	**Cultural and Paleontological Resources - Inadvertent Discovery:** Pursuant to 43 CFR 10.4(g), Tri-State must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), Tri-State must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer. If human remains, funerary items, sacred objects, or objects of cultural patrimony are discovered on private lands, maintenance activities must stop and Tri-State's designated on the ground representative shall contact the local County Sheriff/Coroner for the area and the Office of the State Archeologist.
17	**Threatened and Endangered Species - Protection of Known Sites:** Specific sites identified on the POD maps for threatened and endangered species will be avoided at all times. Buffer areas around specific sites will be clearly marked onsite by qualified biologists contracted by Tri-State, prior to on-the-ground transmission line and access road (Maintenance Levels 3 and 4) maintenance activities occurring. Where maintenance activities will cause surface disturbance (e.g. installation of new poles, pole replacements, etc), sensitive biological resources, shown on the POD maps, will also be flagged. Flagging of avoidance areas will occur immediately before maintenance/construction activities and the marking/flagging will be removed immediately after maintenance/construction is completed. In areas of endangered plants, a qualified botanist will mark, flag, stake, or fence as appropriate, buffer areas for individual plants for avoidance and protection from construction, maintenance, and operational equipment and pesticide applications.
18	**Threatened and Endangered Species – Seasonal Restrictions and Protection Buffers:** Routine access road maintenance will comply with the following seasonal restrictions and protection buffers: • Active raptor nests: No activity within a ½-mile radius of active raptor nests (1 mile for Peregrine falcons) from February 1 through August 15. • Active bald eagle nests: No activity within ½-mile radius of active nests from November 15 through July 31. • Active golden eagle nests: No activity within ½-mile radius of active nests from February 1 through July 15. • Bald eagle winter roosts: No activity within ¼-mile radius of winter bald eagle roosts from December 1 through April 15. Activity may be permitted at other periods. If periodic inspections or other activities are required within the buffer zone during the winter use period, activity should be restricted to the hours of 10:00 am and 2:00. • Big game winter range: No activity during crucial big game winter use periods on crucial winter range from December 1 through April 15.

Table 1.2-3 Environmental Protection Measures (EPMs)	
EPM No.	**Description**
19	**Threatened and Endangered Species-Uinta Basin Hookless Cactus Survey:** An inventory survey for Uinta Basin hookless cactus will be conducted along the access roads in suitable habitat located on the Scenic Mesa Ranch property, if road improvements are required (Maintenance Levels 3, 4 or 5) in the future. The survey will be conducted prior to surface disturbance activities and during the flowering season of the plant (late April to mid-May). If locations of cactus are identified, these locations and avoidance measures will be added to the POD maps. Avoidance measures will be the same as described in EPM no. 17
20	**Threatened and Endangered Species-Future Kit Fox Protection:** Transmission lines can provide hunting perches for raptors, and kit foxes are vulnerable to predation from golden eagles and great horned owls. The proposed action would not result in increased vulnerability of kit foxes to avian predation over the existing situation. However, if BLM documents project-related impacts to kit foxes in the future, Tri-State would install perch diverters in specific areas to avoid and minimize impacts to this species.
21	**Air Emissions and Noise:** Tri-State will properly maintain its road and transmission line maintenance equipment to minimize emissions and noise.
22	**Excess Soil Excavation:** Excess soil excavated from the holes of any poles requiring replacement or from the holes for any new poles that are added will be evenly spread on the access roads in the immediate vicinity of the pole structure.
23	**Covers for Structure Foundation Holes**: Structure foundation holes left open overnight will be covered. Covers will be secured in place and will be strong enough to prevent livestock or wildlife from falling through and into a hole.
24	**Damaged Fences and Gates:** If damaged, fences, gates, and brace panels will be reconstructed to appropriate BLM standards as determined by the authorized officer.
25	**Pesticides:** Tri-State will be responsible for weed control on disturbed areas within the limits of the right of way. Tri-State will consult with the authorized officer for planning acceptable weed control measures on all noxious and invasive weed infestations within the limits of the right of way. The use of pesticides shall comply with federal and state laws governing their proper use, storage, and disposal, and any limitations imposed by the Secretary of the Interior.
26	**Weeds**: All construction equipment to be used in connection with this project will first be power washed thoroughly to minimize the introduction and spread of noxious and invasive weed species to the area. Any equipment taken off-site will also be power washed prior to being returned to work on the transmission line and access roads.
27	**Hazardous Materials**: Tri-State shall comply with all applicable federal laws and regulations existing or hereafter enacted or promulgated regarding toxic substances or hazardous materials. In any event, Tri-State shall comply with the Toxic Substance Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the ROW or on facilities authorized under this ROW Grant (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, section 102b. A copy of any report required or requested by any federal agency or state government as a result of a reportable release or spill of any toxic substance shall be furnished to the authorized officer concurrent with the filing of the reports to the involved federal agency or state government.
28	**Trash:** No burning of trash, litter, trees, brush or other vegetative material shall be allowed under this grant. Trash created by maintenance crews will be removed from the site on a daily basis.
29	**Public Health and Safety:** Tri-State shall comply with applicable State standards for public health and safety, environmental protection and siting, construction, operation, and maintenance, if these State standards are more stringent than federal standards for similar projects.
30	**Civil Rights**. Tri-State or Tri-State's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

1.3 Description of No Action Alternative

Under the No Action Alternative the authorization of the existing transmission line and access roads under FLPMA would not occur. The existing BLM ROW authorization would remain in effect until the expiration date in 2017. The perpetual easement on the 7,100 acres of public land, previously under private ownership, would continue as stated in the present title documents. The existing perpetual easement allows for construction of the transmission line and road access across any/all of the property for operation and maintenance. At the expiration of the existing BLM ROW Grant (#COC-1534) the transmission line would either be authorized under guidelines in place at that time, or, if required by the agency, the transmission line would be removed. The perpetual easements on the 7,100 acres of public land, previously under private ownership, would remain in place.

1.4 Alternative Considered but not Carried Forward

No other action alternatives have been considered to the authorization of the existing 115kV transmission line and access roads under FLPMA. Any alternative voltage or route would cause new short-term construction disturbances and long-term operational effects that would be similar to or greater than activities envisioned under the POD, and would require an amendment to the ROW Grant.

2.0 Need For The Action

In 1967, the BLM issued a ROW Grant to Tri-State's predecessor for the construction, operation and maintenance of the Hotchkiss Substation to Spring Creek Tap 115kV transmission line. Since that time, the BLM has acquired additional private lands that had private easements in place for the existing 115kV transmission line. The recently approved Gunnison Gorge National Conservation Area RMP (November 2004) encompasses some of these previously acquired private lands. The RMP states (BLM, January 2004, Proposed RMP and Final EIS, page 4-69):

> *"The BLM would cooperate with Tri-State to match the terms and conditions of the existing 115 kV ROW COC-1534 and those accompanying the easement, where possible, such that consistent operation, maintenance, and upgrading activities could be conducted on the line regardless of the location on public lands."*

Issuance of a new ROW Grant by the BLM is necessary in order to bring the terms and conditions of the existing ROW grant and the easements on public lands previously under private ownership under one document. A new ROW Grant will allow for consistent terms and conditions for the operation and maintenance of the transmission line and access roads across all of the BLM lands in the area. The authorization will ensure that Tri-State is able to operate and maintain the 115kV transmission line in accordance with industry standards, and at the same time ensure that the goals and objectives of the BLM's Gunnison Gorge NCA RMP and Uncompahgre Basin Resource Management Plan (UBRMP) are met.

3.0 Plan Conformance Review

The proposed action is subject to, and has been reviewed for, conformance with the following plans (43 CFR 1610.5, BLM 1617.3) and standards:

- Gunnison Gorge National Conservation Area, Resource Management Plan and Record of Decision, November 5, 2004;
- Uncompahgre Basin Resource Management Plan and Record of Decision, July 26, 1989; and,
- Standards for Public Land Health.

Gunnison Gorge NCA RMP: The RMP for the Gunnison Gorge NCA was approved November 5, 2004. The transmission line and access roads cross the northern portion of the NCA and other public lands to the west of the NCA. The RMP covers all but a small portion of the public lands crossed by the transmission line and access roads. There are two small parcels of public land near the Hotchkiss Substation that are outside the boundaries of the RMP area. These two small parcels are included in the UBRMP.

The Gunnison Gorge NCA RMP discusses the subject transmission line in numerous places throughout the document. It recognizes the past, present, and future rights of Tri-State to occupy the land within the existing 100-foot ROW, and to allow use of access roads to the transmission line. The transmission line and access roads cross public lands within the NCA RMP Management Units 2, 3, and 6. Unit 2 pertains to the Flat Top-Peach Valley OHV Recreation Area, Unit 3 is the Gunnison River Special Recreation Management Area, and Unit 6 pertains to Other Public Lands. The transmission line is specifically discussed in the RMP in the following locations: Summary page S-5; Chapter 1, Table 1-2, page 1-15; Chapter 2, Table 2-1, page 2-2 and 2-3; Chapter 4, Table 4-2, page 4-8, page 4-57, 4-69, and 4-90. Various maps also refer to the location of the transmission line. The authorization of the transmission line and access roads is in compliance with the RMP for the NCA and surrounding public lands.

Uncompahgre Basin RMP: There are two tracts of public land that are crossed by the transmission line and access roads that are located within the boundaries of the UBRMP. These tracts are near the east end of the transmission line ROW and just south of the Hotchkiss Substation (see maps). The ROW is located on the edge of Management Units 5 and 16. UBRMP land management guidance is contained in the Uncompahgre Basin Resource Management Plan and Record of Decision dated July 1989. The planning unit is divided into 16 Management Units to allow for specific guidance for various resources present in each area. Guidance for Management Unit 5 concerning major utilities is described on page 18 as follows: "The management unit will be open to development of major utility facilities but no surface disturbing activities will be permitted from March 1 through May 31 if necessary to protect wet soils."

There is no specific written guidance for major utilities in Management Unit 16. However, in Chapter Three, Summary of Management Decisions by Resource, on pages 29 and 30 under Major Utilities, the guidance states: "Since there are no significant resource conflicts, Management Units 1, 3, 8, 11, and 16 will be open to major utility development with minimal stipulations." The authorization of the transmission line and access roads is in compliance with the UBRMP for these two Management Units.

Standards for Public Land Health: In January 1997, the Colorado Bureau of Land Management approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in the environmental analysis. These findings are located in specific resource sections in Chapter 4.0. The EA analysis (Chapter 4.0) states that the proposed action would meet BLM's Standards for Public Land Health.

4.0 Affected Environment, Environmental Consequences, and Mitigation Measures

4.1 Scope and Organization of EA – BLM Critical Elements, Non-Critical Elements, and Public Land Health Standards

4.1.1 BLM Critical Elements

Chapter 4.0 of the EA describes the Affected Environment and Environmental Consequences of the proposed action and No Action Alternative. The BLM's NEPA Handbook (H-1790-1) requires that all EA's address certain Critical Elements of the environment. Critical Elements are classified according to: 1) Critical Elements that are Not Applicable to the proposed action, and 2) Critical Elements that are Applicable to the proposed action. If the element does not occur within the project area, or would not be affected, the element is not discussed further in the EA. The elimination of non-relevant issues is consistent with the Council on Environmental Quality (CEQ) guidelines (40 CFR 1500.4).

4.1.1.1 Critical Elements Not Applicable to the Proposed Action

The following elements are not applicable to the proposed action because either the resources are not present within the project area, or the types of activities proposed would not have the potential to cause environmental impacts or damage:

- Air Quality;
- Area of Critical Environmental Concern;
- Environmental Justice;
- Native American Religious Concern;
- Wild and Scenic Rivers; and,
- Wilderness.

4.1.1.2 Critical Elements Applicable to the Proposed Action

The proposed action would entail the on-going operation and maintenance of the existing transmission line. This proposed action would entail the potential installation or replacement of poles, conductors or hardware, as well as regular maintenance of access roads to service the transmission line, as described in Section 1.0 of this EA. The following Critical Elements are discussed in this EA:

- Migratory Birds;
- Threatened, Endangered and Sensitive Species;
- Invasive and Noxious Weeds, Non-Native Species;
- Wetlands and Riparian Zones;
- Surface and Ground Water;
- Water Quality, Surface and Ground;
- Floodplains;
- Wastes, Hazardous or Solid;

- Cultural Resources; and,
- Farmlands Prime and Unique.

4.1.2 Public Land Health Studies

This EA discusses Public Land Health Standards as well as non-critical BLM elements applicable to the proposed action. Findings for Public Land Heath Standards are contained in this document for the following:

- Soils – Findings for Standard 1;
- Wetlands – Findings for Standard 2;
- Vegetation, Wildlife (Aquatic and Terrestrial) – Findings for Standard 3;
- Threatened, Endangered and Sensitive Species – Findings for Standard 4; and,
- Water Quality – Findings for Standard 5.

4.1.3 Non-critical Elements

The following non-critical elements are not applicable to the proposed action because either the resources are not present within the project area, or the types of activities proposed would not have the potential to cause environmental impacts or damage:

- Access;
- Cadastral Survey;
- Fire;
- Forest Management;
- Geology and Minerals;
- Hydrology/Water Rights;
- Law Enforcement;
- Paleontology;
- Noise;
- Range Management;
- Socio-Economics; and,
- Transportation.

The following non-critical elements are evaluated in the EA:

- Land Use and Recreation; and,
- Visual Resources.

4.2 BLM Critical Elements Applicable to the Proposed Action

4.2.1 Migratory Birds

4.2.1.1 Affected Environment

The migratory species of highest concern are those on the U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern for the Southern Rockies. A number of the birds on this list do not occur in the habitats impacted by the proposed action; and some, like the golden

eagle, peregrine falcon, northern harrier, ferruginous hawk, and prairie falcon, are found within the project area either as nesting species or as migrants. In addition to the birds on this list there are a wide variety of migratory species, including waterfowl, owls, and songbirds that utilize the habitats crossed by this project. There are no known reports of the existing transmission line causing collision or electrocution problems for any bird species.

Environmental Consequences and Mitigation Measures

Of the birds on the Birds of Conservation concern list, as well as the other migratory species present in the area, the larger species (such as the golden eagle, ferruginous hawk, peregrine falcon, prairie falcons, owls, and larger waterfowl species) would have potential to suffer mortalities from collisions with the power lines or the static line. Given that this transmission line has no known history of collision mortalities, there is a very small likelihood that this potential impact would ever become detectable even at the local population level. The construction and design of this transmission line are such that electrocution mortalities are essentially impossible. Therefore the proposed action would not result in any unintentional take of migratory birds.

4.2.2 Threatened, Endangered, and Sensitive Species

4.2.2.1 Affected Environment

This section addresses threatened, endangered, and sensitive (TES) species and includes a finding for Public Land Health Standards 3 and 4. A number of Federally Threatened, Endangered or Candidate Species, BLM Sensitive Species and State of Colorado Listed Species were reviewed. Table 4.2-1 lists the species considered. Surveys were conducted in the spring and autumn of 2004 by BIO-Logic Environmental to document the location and occurrences of sensitive species within the Tri-State transmission line ROW and access roads. Specific species surveyed are discussed in this section and the locations of sensitive species recorded in the project area are shown on the map exhibits at the back of this EA.

Federally Listed or Candidate Species

Table 4.2-1 includes all species listed by the USFWS as threatened or endangered, or candidates for listing, that may occur in Delta or Montrose counties (USFWS 2004). These include 5 birds, 2 mammals, 1 amphibian, 4 fish, 1 invertebrate, and 2 plants. The following federally listed or candidate species do not occur in the project area, do not have suitable habitat in the project area, and would not be affected by the proposed action. These species were therefore eliminated from further analysis: Gunnison sage-grouse, Mexican spotted owl, Canada lynx, Boreal toad, and Uncompahgre fritillary butterfly.

The remaining federally listed or candidate species are discussed below. Biological surveys for this project were conducted in suitable habitats along the proposed transmission line ROW and access roads for federally listed clay-loving wild buckwheat, Uinta Basin hookless cactus, and black-footed ferret (prairie dog habitats). Surveys for selected BLM sensitive plants and noxious weeds were also completed for federal lands (BIO-Logic Environmental 2004). Species identified through surveys are shown on Map Exhibits 1 through 9 at the back of the EA document. Detailed maps showing the locations of Clay-loving Wild Buckwheat (Federally Endangered) and Uinta Basin Hookless Cactus (Federally Threatened) are contained in the POD.

Clay-loving Wild Buckwheat (Federally Endangered)

The clay-loving wild buckwheat is a low, slow-growing shrub endemic to Montrose and Delta counties in Colorado. Less than 30 occurrences are known, and many are small; about half of the known plants occur in 2 localities (USFWS 1988a). The buckwheat grows exclusively on clay soil derived from Mancos shale.

Three occurrences of the buckwheat within the ROW have been documented (see EA Map Exhibits 1-9) and all occurrences were found during project biological surveys. All occurrences are small, estimated between about 50 and 100 plants, and occur in the adobes adjacent to Peach Valley near structures 134, 135, and 160. The occurrences at structures 134 and 135 are on BLM land; the occurrence at structure 160 is divided between private and BLM land. All of the occurrences are partly within the 100-foot ROW, and all are bordered or crossed by a 2-track primitive access road. Near structures 134 and 160, buckwheat plants closely border the access road, and near structure 160 on private land, several buckwheat plants are growing in the road between the tracks. No buckwheat plants are growing immediately underneath structures; the closest buckwheat plants are about 30 feet from structure 134 and about 50 feet from structure 160.

Table 4.2-1. Federally Threatened, Endangered, Or Candidate Species, BLM Sensitive Species, And State Of Colorado Listed Species Potentially Occurring In The Project Area

Common Name[1]	Scientific Name	Status[2]	Habitat	Habitat in Project Area?
Birds				
Bald eagle	*Haliaeetus leucocephalus*	T, ST	Major river systems, reservoirs, arid basins	Yes, known to occur
Gunnison sage-grouse	*Centrocercus minimus*	C, SC, BLM	Sagebrush interspersed with wet meadows	No
Mexican spotted owl	*Strix occidentalis lucida*	T, ST	Mixed conifer old-growth forests in steep mountain or canyon topography	No
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	C, SC, BLM	Low elevation river corridors, cottonwood riparian forests	Yes
Mammals				
Canada lynx	*Lynx candensis*	T, SE	Spruce/fir/mixed conifer/lodgepole pine forests (primary), or mixed deciduous/conifer (secondary)	No
Black-footed ferret	*Mustela nigripes*	E, SE	Prairie dog colonies; sagebrush, desert shrublands, grasslands	No
Kit fox	*Vulpes macrotis*	BLM, SE	Desert shrublands, prairies	Yes, known to occur
Fringed myotis	*Myotis thysanodes*	BLM	Ponderosa pine, pinyon-juniper, mountain shrub, and desert shrub	Yes
Yuma myotis	*Myotis yumanensis*	BLM	Pinyon-juniper, desert shrub, riparian areas	Yes
Spotted bat	*Euderma maculatum*	BLM	Breeding: rocky cliffs near riparian areas. Non-breeding: ponderosa pine, pinyon-juniper, semiarid shrublands	Yes

Table 4.2-1. Federally Threatened, Endangered, Or Candidate Species, BLM Sensitive Species, And State Of Colorado Listed Species Potentially Occurring In The Project Area

Common Name[1]	Scientific Name	Status[2]	Habitat	Habitat in Project Area?
Townsend's big-eared bat	*Corynorhinus townsendii*	SC, BLM	Breeding: caves, abandoned mines; Non-breeding: forests, woodlands, shrublands, and grasslands	Yes
Amphibians				
Boreal toad	*Bufo boreas boreas*	C, SE	Spruce-fir forests & alpine meadows near slow-moving surface waters	No
Northern leopard frog	*Rana pipiens*	SC, BLM	Lakes, ponds, permanent wetlands, streams with slow-moving water	Yes, known to occur
Fish				
Bonytail chub	*Gila elegans*	E, SE	Colorado River and major tributaries	No*
Colorado pikeminnow	*Ptychocheilus lucius*	E, ST	Colorado River and major tributaries	No*
Humpback chub	*Gila cypha*	E, ST	Colorado River and major tributaries	No*
Razorback sucker	*Xyrauchen texanus*	E, ST	Colorado River and major tributaries	No*
Roundtail chub	*Gila robusta*	SC, BLM	Lower elevation rivers, Colorado River Basin	Yes, known to occur
Bluehead sucker	*Catostomus discobolus*	BLM	Lower elevation rivers, Colorado River Basin	Yes, known to occur
Flannelmouth sucker	*Catostomus latipinnis*	BLM	Lower elevation rivers, Colorado River Basin	Yes, known to occur
Invertebrates				
Uncompahgre fritillary butterfly	*Boloria acrocnema*	E	Alpine tundra above 13,000 feet elevation, associated with snow willow	No
Great Basin silverspot butterfly	*Speyeria nokomis nokomis*	BLM	Streamside meadows and wet areas, semiarid shrublands and woodlands	Yes
Plants				
Clay-loving wild buckwheat	*Eriogonum pelinophilum*	E	Mancos shale badlands, salt desert shrublands 5200-6400' elevation; adobe hills of the Uncompahgre and Gunnison river valleys	Yes, known to occur
Uinta Basin hookless cactus	*Sclerocactus glaucus*	T	Rocky hills, mesas, slopes, 4500-6000' elevation, desert shrub communities of the Gunnison and Colorado river valleys	Yes, known to occur
Montrose bladderpod	*Lesquerella vicina*	BLM	Pinyon-juniper and desert shrub bordering Uncompahgre Valley	Yes
Delta lomatium	*Lomatium concinnum*	BLM	Pinyon-juniper, sagebrush, desert shrublands; endemic to Montrose and Delta counties, Colorado	Yes, known on private lands
Rocky Mountain thistle	*Cirsium perplexans*	BLM	Pinyon-juniper, mountain shrublands; often on disturbed sites	Yes

Notes:
1. Species listed in this table provided by USDI-FWS (2003a).
2. Status: E = Federally listed as endangered; T = Federally listed as threatened; C = Candidate for listing as federally threatened or endangered; BLM = BLM sensitive; SE = State endangered; ST = State threatened; SC = State species of special concern (not a statutory category).
* Water depletions potentially affect downstream populations and critical habitat of this species.

Source: BIO-Logic Environmental, 2004.

Uinta Basin Hookless Cactus (Federally Threatened)

The Uinta Basin hookless cactus is a small barrel-shaped cactus that occurs from the Montrose area northwest into eastern Utah (USFWS 1990). Known occurrences total about 15,000 plants. It occurs in arid shrublands of the lower Gunnison and Uncompahgre River valleys, usually in soils with high clay content and surface gravel often derived from sandstone. It frequently grows in association with shadscale, sagebrush, and juniper woodland, often near boulders, rock outcrops, or on stony dry river terraces.

Twelve occurrences of the Uinta Basin hookless cactus are known in the ROW for the transmission line and access roads (see EA Map Exhibits 1-9). All documented occurrences are on BLM land. These are all new occurrences found during project biological surveys. Six occurrences are on the west rim of Peach Valley, spaced along about 2,400 feet of ROW between structures 147 and 151. Six more occurrences are widely scattered along 3.5 miles of the ROW west of the Gunnison Gorge, between structures 176 and 202. All but two of the cactus occurrences are small (1 to 7 plants), with 2 occurrences of 20 to 50 plants. Most occur within the transmission line ROW, and no cactus plants are known to be closer than about 200 feet from existing structures. Several occurrences are near the edges of primitive two-track access roads.

Some project access roads on Scenic Mesa private lands could not be surveyed for Uinta Basin hookless cactus during spring (the only period when these small plants are conspicuous because of large distinctive flowers). On Scenic Mesa, potential habitat for the cactus was mapped within 50 feet of access roads in the fall of 2004 (see EA Map Exhibits 1-9).

Bald Eagle (Federally Threatened)

Bald eagles rarely nest in Colorado (Kingery 1998), and no nest sites are known within 2 miles of the project area (CDOW, unpublished data). However, about 1,000 bald eagles winter in Colorado annually, including up to a few dozen in the lower Uncompahgre and Gunnison valleys. In this area bald eagles concentrate along the river bottoms. They gather in communal roosts at night, usually in secluded areas. During the day they forage over very large areas and often perch in tall trees, particularly tall cottonwoods along the rivers. No nocturnal communal roosts are known within 2 miles of the project area. CDOW has mapped bald eagle winter concentration areas along the Uncompahgre, Gunnison, and North Fork Gunnison Rivers (see EA Map Exhibits 1-9). The transmission line and access roads cross bald eagle winter concentration areas at the Uncompahgre River and Gunnison Gorge spans, and border winter concentration area along the North Fork Gunnison River. There are no reports of mortalities due to bald eagle collisions with this power line crossing of the river.

Western Yellow-billed Cuckoo (Federal Candidate)

The western yellow-billed cuckoo inhabits mature deciduous forests of western North America. In western Colorado the cuckoo has mostly been found in low elevation cottonwood riparian forests with mature trees, closed canopy, and a dense shrub understory (Kingery 1998). The yellow-billed cuckoo was once an uncommon summer resident in western Colorado and is now extremely rare, with most records in the Uncompahgre, Gunnison, and Colorado River valleys (Andrews and Righter 1992). The species is not known to occur in the project area. Potential

breeding habitat may exist at the Uncompahgre River span, in riparian cottonwood forest on private lands.

Black-footed Ferret (Federally Endangered)

Black-footed ferrets are small carnivores of western North America. They feed mostly on prairie dogs and inhabit large prairie dog colonies, where they shelter in prairie dog burrows (USFWS 1988b). Black-footed ferrets were almost extinct by the 1980s, but recovery efforts have reestablished several populations including one in northwestern Colorado. USFWS and BLM presume that black-footed ferrets are absent from Montrose and Delta counties because of lack of suitable habitat. Biological surveys for this project found numerous small colonies of prairie dogs scattered along the proposed transmission line and access roads ROW on BLM land in the Peach Valley area (BIO-Logic Environmental 2004). However, prairie dog town size and burrow density are not adequate to provide suitable black-footed ferret habitat (USFWS 1989).

Colorado River Endangered Fishes

Four species of federally endangered fish occupy the Colorado River watershed downstream from the project area. The Colorado pikeminnow and razorback sucker occur in the Gunnison River as far upstream as Delta (CDOW, unpublished data), several miles downstream from the transmission line span of the Gunnison Gorge, as well as elsewhere in the Colorado River watershed. The humpback chub and bonytail have more limited distributions, the nearest to the project area in the Colorado River several miles below Grand Junction (CDOW, unpublished data). USFWS (1994) has designated critical habitat for all four species to include the Colorado River below Grand Junction; for the Colorado pikeminnow and the razorback sucker, critical habitat is also designated in the Gunnison River upstream to Delta.

BLM Sensitive Species

Species designated by BLM as Sensitive in Colorado (BLM 2000) were reviewed, and species that are known to occur or have suitable habitat in the project area are evaluated in this EA (see Table 4.2-1).

Biological surveys for this project were conducted for three BLM sensitive plant species. No occurrences of Rocky Mountain thistle or Montrose bladderpod were found. Eleven occurrences of Delta lomatium were found scattered along about 2 miles of the transmission line right-of-way on Scenic Mesa, on private lands.

Kit foxes are small carnivores inhabiting desert shrublands and arid prairies. They have become very rare in western Colorado, and are listed by CDOW as state endangered. The transmission line crosses a small population area in Peach Valley (Fitzgerald 1996). Kit foxes are mostly nocturnal, and shelter during the day in natural crevices, abandoned dens of other animals, or dens they have constructed.

Four sensitive bat species may occur in the project area (Armstrong et al. 1984). The fringed myotis occupies various semiarid woodland and shrubland habitats, and the Yuma myotis occurs in lower elevation riparian areas. These tiny bats roost in small rock crevices, in tree cavities, or under bark. The spotted bat occurs in drier forests and woodlands, and roosts in crevices of tall, vertical cliffs. Townsend's big-eared bat inhabits drier forests and woodlands, and roosts in caves and abandoned mines.

The northern leopard frog occupies streams, lakes, ponds, and ditches in various habitats and elevations (Hammerson 1999). Several records are known from Montrose and Delta counties, and the frog probably occurs in some of the permanent surface waters crossed by the transmission line. The roundtail chub, flannelmouth sucker, and bluehead sucker occur in the Gunnison River and possibly the Uncompahgre River in the project area (Woodling 1985).

The Great Basin silverspot is a butterfly that occupies riparian areas and wet meadows where the only host plant used by the caterpillars of this species is violets. No occurrences are known from the project area, but it may occur in riparian areas crossed by the transmission line.

4.2.2.2 Environmental Consequences and Mitigation Measures

The general types of impacts that may occur to special status plants and animals are discussed first, including the EPMs that are incorporated into the POD to avoid and minimize potential impacts from occurring (Table 1.2-3). The specific impacts that may occur to special status species in the project area are subsequently discussed by species type.

Potential Impacts to Plants

Under the proposed action, infrequent localized disturbance of ground surfaces would occur along access roads or within the transmission line ROW, caused by road maintenance, driving or handling equipment or materials in the transmission line ROW and around pole structures. These actions would usually be infrequent and confined to small areas along the access roads and within the transmission line ROW. Nevertheless, these actions could cause direct impacts to TES plants by damaging or destroying individual plants, which may not re-grow or may be very slow to re-colonize a disturbed site.

For TES plants, destruction of even a few plants or a small colony may adversely affect the regional or global population. However, the location of TES plant species is known in the project area because of biological surveys, and commitment to mitigation measures would avoid direct impacts to TES plants (EPMs 1, 17, and 19).

Potential indirect impacts to plants could include soil compaction from driving vehicles on access roads, and increased erosion from road maintenance. These factors can potentially affect microhabitats for plants. With implementation of the mitigation measures in the POD (EPMs 1, 7, 8, 9 and 10), these potential effects are likely to be rare and localized.

The introduction or spread of noxious or invasive plant species by vehicles and heavy equipment represents another potential indirect impact to plants. Invasive weeds may adversely impact native plants through competition and other ecological pathways. These impacts are most likely to occur in localized areas along road margins and in moist areas, and invasive plants are already common in most of these situations in the project area. With implementation of the POD mitigation measures (EPMs 25 and 26) the spread of invasive plant species would be minimized.

Potential Impacts to Animals

The proposed action could potentially cause direct impacts to animals through mortality or disturbance. Small mammals and reptiles could occasionally be crushed on the ground surface or

in burrows by vehicles or by road grading or excavation work. Such mortality is expected to be rare.

A slight risk of bird mortality by collision with conductors will remain if this project is authorized. However, no known bird strikes have occurred in the project area with the existing transmission line. Bird strike hazard is greatest where transmission lines cross or border areas of bird concentration, such as large wetlands or where topography channels flying birds into confined areas (APLIC 1994). No prominent bird concentration areas are known in the project area. At the Uncompahgre River span, the line crosses an area of increased waterfowl and raptor use, and bird collision hazard here may be elevated compared to the rest of the project area. However, the proposed action would not result in increased hazard over the present situation, except for possibly slightly elevated risk from higher conductors if the line is uprated. Another potential area of increased collision risk is the span at the Gunnison Gorge. However, the transmission line is high above the canyon floor, and no known bird strikes have occurred here in the past.

The risk of electrocution from the existing transmission line to perching raptors is extremely low and will continue under the proposed action. The transmission line has 12.5 feet of spacing between the conductors, which makes bridging this gap nearly impossible for even the largest of raptors. No known electrocutions have occurred on the existing transmission line. Animal disturbance is another potential direct impact of the proposed action. Infrequent human presence on foot, in vehicles, or in aircraft during inspection and repair work can cause animals to temporarily move away from preferred habitats; most would quickly return and there would be no measurable impact. However, in a few special situations, human disturbance can have more substantial impacts. Nesting raptors are particularly sensitive to human presence and may abandon nests or eggs if disturbed (Postovit and Postovit 1987). Bald eagles in communal nocturnal roosts are also sensitive to human presence.

Potential indirect impacts to animals could include damage or destruction of natal dens or nest sites by surface-disturbing activities. Such actions could result in decreased future reproductive success. For most animal species in the project area, occasional destruction of a den or burrow would have no measurable effect on the population.

Potential Impacts to Special Status Species

Clay-loving Wild Buckwheat

The proposed action could potentially affect this federally endangered species, because three occurrences of the plant exist along the transmission line. Some plants occur at the margin of access road tire tracks, and between the tracks in the middle of the road. Plants also occur in the vicinity of structures 134 and 160, making them vulnerable to crushing during structure maintenance or replacement. Plants could be crushed and killed by road maintenance, or by vehicles pulling off to the side of the road or turning around within the ROW at structure sites. EA Map Exhibits 1-9 show the locations of federally listed plants. Detailed maps of plant locations are contained in the POD, Exhibit A. The POD contains mitigation measures including clearances by qualified personnel for TES species prior to surface-disturbing activities (EPM 17). Federally listed plants would be identified, marked, and avoided. With commitment to these mitigation measures, direct adverse effects to the clay-loving wild buckwheat would be avoided. Indirect effects from soil compaction or erosion are not likely to have a measurable effect on the species.

Effect Determination: There would be "no effect" to clay-loving wild buckwheat.

Uinta Basin Hookless Cactus

The proposed action could potentially affect this federally threatened species. Several occurrences exist in the ROW, with some plants occurring very close to access roads. Additional potential habitat has been mapped along access roads on Scenic Mesa where surveys for the species were not possible. No plants are known to occur within about 200 feet of existing structures; consequently, there is a low risk of adverse impacts from structure maintenance or replacement. However, risk of plants being crushed or killed by vehicles is similar to that described above for clay-loving wild buckwheat. The POD and EA Map Exhibits 1-9 contains detailed maps of the occurrences of Uinta Basin hookless cactus in the project area, and commitment to mitigation measures in the POD as described above for clay-loving wild buckwheat would avoid direct adverse effects to Uinta Basin hookless cactus (EPM 17 and 19). Indirect effects from soil compaction or erosion are not likely to have a measurable effect on the species.

Effect Determination: There would be "no effect" to Uinta Basin hookless cactus.

Bald Eagle

Even though no nests or nocturnal communal roosts are known in or near the project area, mitigation measures in the POD include avoidance of routine transmission line and access road maintenance within ½ mile of active raptor nests and within ¼ mile of bald eagle nocturnal communal roosts (EPM 18). Commitment to these measures would avoid direct adverse effects to bald eagles from routine maintenance activities. A very slight chance of disturbance of bald eagles exists from emergency repairs, if nests or nocturnal roosts are established near the transmission line or access roads in the future.

Slight risks of collision or electrocution hazard exist with the existing transmission line, although no bald eagle mortalities are known to have occurred. These risks would not be increased by the proposed action except for a possible slightly increased risk of collision hazard from uprating the line, due to raising the structures and conductors. Collision and electrocution risk would still remain small and discountable.

Effect Determination: The proposed project would result in a "may affect, not likely to adversely affect, due to discountable effects" for the bald eagle.

Western Yellow-billed Cuckoo

Suitable breeding habitat for the Western Yellow-billed Cuckoo is limited to cottonwood riparian forest at the Uncompahgre River. This species is very unlikely to be present, and the habitat will continue to be spanned. Consequently, the proposed action is not likely to directly affect the species even if cuckoos occupy the habitat in the future. No habitat conditions would be altered for yellow-billed cuckoo by the proposed action, so no indirect effects would occur.

Effect Determination: The proposed action would result in a "no effect" on yellow-billed cuckoos.

Black-footed Ferret

Black-footed ferrets are presumed absent from the project area, and prairie dog towns in the project area are not large or dense enough to provide suitable habitat for black-footed ferrets. As a result, the proposed action would not cause direct or indirect effects to black-footed ferrets. The proposed project would not decrease habitat suitability for prairie dogs or black-footed ferrets in the future.

> Effect Determination: The proposed action would have "no effect" on black-footed ferrets.

Endangered Colorado River Fishes

At this time Tri-State does not propose to utilize water for activities associated with this proposed action. Consequently, the proposed action would not result in annual water depletions to the Colorado River Basin, which would be "likely to adversely affect" the four endangered fishes.

> Effect Determination: The proposed action would have "no effect" on the listed Colorado River fish.

BLM Sensitive Species

No BLM sensitive plant species are known to occur on BLM-administered land that would be included under the proposed ROW Grant. As a result, the proposed action would not have any direct impact on BLM sensitive plants on BLM-administered lands. Indirect impacts from soil compaction or erosion would be minimized by commitment to mitigation measures in the POD requiring avoiding unnecessary surface disturbance, and controlling water runoff and soil erosion from road surfaces (EPMs 8 and 9). Indirect impacts are not likely to have a measurable impact on any BLM sensitive plant species.

Kit foxes are known to occur on BLM lands in the project area in Peach Valley. There is little chance of direct mortality of kit foxes caused by the proposed action; collisions with vehicles are unlikely because kit foxes are mostly nocturnal and vehicle speeds will mostly be slow in the project area. A slight chance exists of disturbance of kit foxes at natal dens, which could reduce reproductive success if kit foxes were to establish a natal den very close to the ROW or an access road requiring maintenance. Kit foxes are generally tolerant of human presence as long as they are not persecuted (Cypher and Warrick 1993, O'Farrell 1987), and natal den abandonment is unlikely as long as the den itself is not impacted by vehicles or machinery. As a consequence, direct adverse impacts to kit foxes are very unlikely. Transmission lines can provide hunting perches for raptors, and kit foxes are vulnerable to predation from golden eagles and great horned owls. The proposed action would not result in increased vulnerability of kit foxes to avian predation over the existing situation. If BLM documents the need in the future, Tri-State would install perch diverters to avoid and minimize impacts to kit foxes (EPM 20).

The four sensitive bat species may occur on any BLM lands in the project area. Of special concern are the protection of roost sites, which could include caves, inactive mines, crevices in cliffs and rock outcrops, and large trees. The proposed action would not destroy or disturb caves, inactive mines, or tall cliffs. In rare instances, crevices in small rock outcrops could be disturbed by road maintenance, or a pinyon or juniper tree could be trimmed or removed for the same purpose. Such actions would be rare, and unlikely to result in any measurable impact to sensitive bat species. Riparian habitats deemed important for the Yuma myotis would not be disturbed or destroyed by the proposed action.

The three BLM sensitive fish species and the northern leopard frog may occur on BLM lands in the Gunnison River, and the northern leopard frog may also occur in irrigation ditches and drains on BLM land in Peach Valley. The Great Basin silverspot butterfly may occur on BLM lands in riparian areas of Peach Valley associated with irrigation ditches and drains. Aquatic and riparian habitats for these species would not be altered or destroyed by the proposed action.

4.2.2.3 BLM Public Land Health Standards – Findings for Standards 3 and 4

The BLM Uncompahgre Basin RMP includes direction to manage public lands to achieve and maintain several Public Land Health Standards, including Standards for 3 and 4, as described below:

> **STANDARD 3**: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations and ecological processes.
>
> **Indicators:**
>
> - Noxious weeds and undesirable species are minimal in the overall plant community.
> - Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.
> - Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.
> - Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.
> - Photosynthetic activity is evident throughout the growing season. Diversity and density of plant and animal species are in balance with habitat landscape potential and exhibit resilience to human activities.
> - Appropriate plant litter accumulates and is evenly distributed across the landscape.
> - Landscapes are composed of several plant communities that may be in a variety of successional stages and patterns.
>
> **STANDARD 4:** Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.
>
> **Indicators:**
>
> - All the indicators associated with the plant and animal communities standard apply.
> - There are stable and increasing populations of endemic and protected species in suitable habitat.
> - Suitable habitat is available for recovery of endemic and protected species.

Findings – Public Land Health Standards 3 and 4: With Tri-State's commitment to the mitigation measures in the POD, the proposed action would not decrease the chance of achieving or maintaining Public Land Health Standard 3 or 4. Additional information on findings for these standards is contained in EA Section 4.3.2.3 and 4.3.2.4.

4.2.3 Invasive, Noxious and Non-Native Species

4.2.3.1 Affected Environment

Herbaceous noxious weeds are widespread and fairly common throughout the project area on BLM lands, mainly on road margins and other disturbed sites, in depressions that hold soil moisture, and along irrigation ditches (BIO-Logic Environmental, 2004). Blue mustard, red stem filagree, and halogeton are the most common species; other species include Canada thistle, Russian thistle, musk thistle, Russian knapweed, flixweed, whitetop, and field bindweed. Tamarisk is occasional to dense in Peach Valley along irrigation ditches and in arroyos fed by irrigation drainage.

4.2.2.2 Environmental Consequences and Mitigation Measures

The introduction and spread of invasive plant species can result from surface disturbance. The proposed action would not involve frequent or large-scale surface disturbances on BLM lands. Occasional maintenance on portions of existing access roads, and very infrequent excavation work for structure repair or replacement, may disturb road margins and small areas of the ROW. Disturbed areas would generally be more vulnerable to invasion by weed species that are already common along road margins and other existing disturbed areas. If emergency repairs to the transmission line necessitate unavoidable surface damage in wet conditions, Tri-State is committed to mitigation measures in the POD requiring revegetation under BLM direction. Overall, site disturbance could occasionally contribute in localized areas to the spread of invasive plant species that are already common in the area. As part of the POD, measures are included to avoid and minimize the spread of invasive plant species (Table 1.2-3, EPMs 25 and 26).

4.2.4 Wetlands, Riparian Areas, and Floodplains

4.2.4.1 Affected Environment

Wetlands and Riparian Areas

The transmission line crosses two wetlands and nine substantial riparian areas, shown in Map Exhibits 1-9 and briefly described below. These features are associated with the two major river spans and small drainages that receive augmented flows from irrigation drainage. Several other very small riparian areas associated with irrigation ditches cross the ROW on private lands in the Uncompahgre Valley, and are not shown in Map Exhibits 1-9. These riparian areas are very narrow and typically in early successional stages due to frequent disturbance from ditch maintenance.

The largest wetland is a wet meadow (grazed pasture) of sedges and rushes, on private lands in Mexican Gulch between structures 44-46 (structure 45 is in a wet meadow). A small saltgrass wetland also occurs on BLM lands, between structures 153-154 and well away from any structures. Access roads do not cross either of these wetlands.

Two principal riparian areas occur at the river crossings. At the Uncompahgre River, a mature cottonwood-willow forest about 200 feet wide occurs on both sides of the river. The transmission line spans the riparian area above treetop level, and no structures are within the riparian area. At the Gunnison Gorge span, a riparian woodland of scattered cottonwood, tamarisk, and shrubs

occupies the narrow floodplain along the Gunnison Rover. The transmission line spans the Gorge several hundred feet above the riparian area.

The other riparian areas crossed by the transmission line are in natural drainages with augmented flow from irrigation drainage. Riparian vegetation is mostly in early successional stages, dominated by tamarisk, coyote willow, and reed canarygrass.

Floodplains

The existing transmission line crosses the 100-year floodplains associated with the Uncompahgre River, Gunnison River and Mexican Gulch. The Uncompahgre River floodplain is crossed between structures 58 and 59, and the Gunnison River floodplain is spanned between structures 207 and 208. The floodplain of Mexican Gulch is crossed south of La Salle Road (between structures 44 and 46).

4.2.4.2 Environmental Consequences and Mitigation Measures

Under the proposed action, no surface-disturbing actions would normally occur in riparian or wetland areas. One existing structure lies within a wet meadow in Mexican Gulch, on private land. Slight surface disturbance could be necessary in this area for structure maintenance or uprating, but the wet pasture already receives various agricultural disturbances including grazing and irrigation. Any additional project-related disturbance would not be likely to measurably affect the wetland's ecological function or condition. At all other wetland and riparian sites in the project area, no structures or access roads occur within riparian areas other than irrigation ditch margins, and the proposed action would cause no surface disturbance or changes to vegetation in these areas. No long-term adverse impacts to floodplains would result from the proposed action since the Gunnison River is spanned, and structures near the Uncompahgre River would either remain unchanged, or new structures would be sited in the same locations. Similarly, the proposed action would not change, or increase impacts to the floodplain of Mexican Gulch. Tri-State's commitment to mitigation measures including erosion control and avoiding unnecessary surface disturbance would minimize indirect adverse impacts to riparian areas and wetlands (EPMs 1, 6, 7, 8 and 9).

4.2.4.3 BLM Public Land Health Standards – Findings for Standard 2

The BLM Uncompahgre Basin RMP includes direction to achieve and maintain Public Land Health Standard 2:

> **STANDARD 2:** Riparian systems associated with both running and standing water, function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.
>
> **Indicators:**
>
> - Vegetation is dominated by an appropriate mix of native or desirable introduced species.
> - Vigorous, desirable plants are present.
> - There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density.

- Stream bank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high stream flow events.
- Plant species present indicate maintenance of riparian moisture characteristics.
- Stream is in balance with the water and sediment being supplied by the watershed (e.g., no head cutting, no excessive erosion or deposition).
- Vegetation and free water indicate high water tables.
- Vegetation colonizes point bars with a range of age classes and successional stages.
- An active floodplain is present.
- Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies.
- Stream channels have appropriate size and meander patterns for the streams' position in the landscape, and parent materials.
- Woody debris contributes to the character of the stream channel morphology.

Finding for Public Land Health Standard 2: With Tri-State's commitment to the mitigation measures in the POD, the proposed action would not decrease the chance of achieving or maintaining Public Land Health Standard 2.

4.2.5 Water Resources

This section of the EA addresses Water Resources including surface waters and water quality, and Findings for Public Land Health Standard 5.

4.2.5.1 Affected Environment

The project area crosses portions of the Gunnison River drainage basin, a major subbasin of the Upper Colorado River basin. Major surface waters in the Project Area include the Uncompahgre River and the Gunnison River. The existing transmission line crosses both of these rivers, as well as a number of intermittent streams and drainages and man-made irrigation ditches. The Uncompahgre River is crossed on private lands in the Uncompahgre Valley, between structures 58 and 59. The Gunnison River is crossed on public lands several hundred feet above the river between structures 207 and 208. The Selig and Peach Valley Canals are the major irrigation ditches in the project area.

Surface water quality varies and depends substantially on local geology. River segments crossed by the project area that are on the state's 303(d) list for impaired water quality include the Uncompahgre River from Highway 90 in Montrose to Confluence Park in Delta, Colorado. Selenium concentrations in reaches of the Lower Uncompahgre River exceed the State Water Quality Standard of 5 parts per billion. Elevated levels derive from both natural and man-made causes, but are principally associated with Mancos shale. Tributaries and diversion ditches that drain the Uncompahgre River are also listed for selenium and sediment.

Groundwater resources vary by geologic formations. Mancos shale dominates the formations on public lands and the NCA, and little groundwater is naturally associated with this formation (BLM, 2004). The Mancos Shale and soils derived from this formation are the primary sources of salinity and selenium loading to the Uncompahgre and Gunnison Rivers. The unconsolidated valley-fill deposits of the Uncompahgre subbasin are the highest yielding aquifers in the area. Water quality varies considerably, and is generally better than sedimentary rock aquifers.

4.2.5.2 Environmental Consequences and Mitigation Measures

The types of adverse impacts that could result to water resources in the project area include: (a) impaired surface water quality due to increased erosion and sedimentation from exposed, disturbed ground; (b) reduced capacity of natural drainages at road crossings; (c) physical damage to irrigation ditch structures; and (d) impaired water quality (surface or ground) due to spillage or inappropriate disposal of construction materials or vehicle fluids.

The proposed action is expected to have very minor and localized impacts to surface water and water quality; however, since no new access roads would be constructed, and soil disturbances would be limited to localized areas where maintenance of existing access roads may be required, or at sites where existing poles may need either repairs or replacements. These types of impacts would be minimized by EPM 1, 7 and 8 that are incorporated into the POD as part of the proposed action. No additional mitigation measures are required.

4.2.5.3 BLM Public Land Health Standards – Findings for Standard 5

The BLM Uncompahgre Basin RMP includes direction to achieve and maintain Public Land Health Standard 5:

> **Standard 5:** The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.
>
> **Indicators:**
>
> - Appropriate populations of macroinvertabrates, vertebrates, and algae are present.
> - Surface and ground waters only contain substances (e.g. sediment, scum, floating debris, odor, heavy metal precipitates on channel substrate) attributable to humans within the amounts in, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).

Finding for Public Land Health Standard 5: With Tri-State's commitment to the mitigation measures in the POD (EPMs 1, 7 and 8), the proposed action would not decrease the chance of achieving or maintaining Public Land Health Standard 5.

4.2.6 Wastes, Hazardous or Solid

4.2.6.1 Affected Environment

Activities on public BLM lands and private lands crossed by the existing transmission line have the potential to cause hazardous materials contamination, due to vehicles and/or persons accidentally or inappropriately spilling or disposing of materials or vehicle fluids. No known hazardous materials or waste sites occur within the transmission line ROW or access roads.

4.2.6.2 Environmental Consequences and Mitigation Measures

Maintenance of the existing transmission line would entail the continued use of ATV's, trucks and other equipment to access, maintain, and operate the transmission line. All activities would occur in accordance with the ROW Grant for access roads and maintenance of the transmission line.

The POD and EPMs (Table 1.2-3) contain requirements to ensure that Tri-State will comply with all regulations pertaining to hazardous materials and wastes. The potential for these types of impacts would be minimized by EPM 27 that is incorporated into the POD as part of the proposed action. No additional mitigation measures are required.

4.2.7 Cultural Resources

4.2.7.1 Affected Environment

Cultural Resources are defined as fragile and nonrenewable remains of prehistoric and historic human activity, occupation, or endeavor as reflected in districts, sites, structures, buildings, objects, artifacts, runs, works of art, architecture, and natural features that were important in human history. Because of the sensitive nature of cultural resources, the technical report for this Project is on file at the BLM, and the Office of Archaeological and Historic Preservation. This section of the EA provides a brief regional overview and the results of Class III surveys conducted in 2004 for the proposed action.

Regional Overview

Prehistoric occupation of the project area commenced about 12,000 years ago with the entrance of Paleoindian people identified by the Clovis, Goshen, Folsom, and Foothill-Mountain traditions. The sequent Archaic stage (6400-400 B.C.) is represented by a shift from big game hunting to a more broad-based subsistence focusing on smaller game and a wide variety of floral resources. Sometime after 400 B.C. and lasting until about A.D. 1300, a Formative-stage lifeway, characterized by considerable reliance on horticulture and the adoption of a sedentary or semi-sedentary lifestyle, emerged on the northern Colorado Plateau and in the Great Basin. In west-central Colorado, the Formative era appears to be represented by the distinctive Gateway tradition that incorporated elements of both the Fremont and Anasazi cultures. With the demise of a Formative lifeway, the Protohistoric era is recognized. At roughly the same time, or perhaps shortly before, Numic-speaking groups evidently migrated to the region. These mobile hunters are thought to have been the ancestors of the Ute and the Shoshone. The Utes occupied the region until historic times. With contact with Europeans, Utes acquired the horse, enabling them to expand their sphere of interaction to include forays onto the eastern Plains where they acquired Plains Indian attributes including the use of tipis and mode of dress.

The first Europeans to enter west-central Colorado were Spanish explorers from New Mexico. The expeditions of Juan de Rivera from 1761 to 1765 and Dominguez and Escalante in 1776 were the first to describe the area. American fur trappers probably began entering the region in the 1810s with the focus being centered on Antoine Roubidoux's Fort Uncompahgre near present Delta between 1830 and 1844. After the demise of the fur trade, interest in the area was slight with only the Gunnison Expedition passing through in 1853. With the discovery of gold in Colorado in 1858, miners began pushing westward into the far reaches of the Rocky Mountains. Conflict with the Ute was the result, necessitating treaty negotiations. The Treaty of 1868 established western Colorado as the Ute Reservation. However, discovery of gold on reservation lands resulted in further negotiations culminating in the Brunot Agreement of 1873, whereby the Utes ceded the San Juan Mountains. Continued pressures culminated in the Meeker Massacre in

1879, which ultimately led to the removal of nearly all of the Ute bands to reservations in Utah in 1881, save for the Southern Ute and Ute Mountain Ute Reservations along a strip of land along the New Mexico border. With the Ute removed, the land was opened to Euroamerican settlement, which quickly filled the Uncompahgre and Grand valleys with farms and ranches. Expanded irrigation and further agricultural development was made possible by the opening of the Gunnison Tunnel in 1909 as part of the Reclamation Service's Uncompahgre Project.

Class III Inventory

The project area ROW was inventoried to a Class III level by Alpine Archaeological Consultants, Inc. in May and June 2004 (McGuire 2004). Two National Register-eligible sites are present in the project area, and are described below. In addition, 18 isolated finds were recorded on public lands and included 16 prehistoric and two historic finds.

Site 5MN1854, is the Selig Canal (historic site) that is crossed in three separate places by the transmission line ROW. The canal begins approximately 4.3 kilometers northwest of the town of Montrose at the Selig Diversion Dam on the Uncompahgre River. It extends 32 kilometers to the termination point, east of Highway 50 into the East Canal. The site was determined officially eligible for inclusion to the NRHP in 1982 due to its distinct methods of construction and the association with the regionally significant Uncompahgre Project Canal system.

Site 5DT1546 is a large prehistoric site. Transmission structures are within the site boundaries, as are access roads between and to several transmission structures. The site is a dense, lithic scatter that covers 163,908 square meters. The site includes two rock shelters along the north side of Rabbit Gulch, as well as over a 1,000 pieces of dibitage. The site is recommended as eligible for the NRHP, under criterion d. The contributing portion of site 5DT1546 is located north of the existing transmission line and Rabbit Gulch.

4.2.7.2 Environmental Consequences and Mitigation Measures

Impacts created, directly or indirectly, by project activities are considered significant to cultural resources only if they occur to a cultural resource that is considered eligible to or listed on the National Register of Historic Places (NRHP). Disturbance to eligible or listed resources, referred to as historic properties, is an adverse effect.

The proposed action would have the potential to directly or indirectly impact cultural resources during the routine maintenance and operation of the existing transmission line. Cultural resources could also be impacted during repairs and replacements of existing poles and hardware, or during an uprate of the transmission line, due to the presence of crews, vehicles and equipment along the ROW.

Potential impacts to cultural resources that may result from the on-going use of the ROW for the transmission line and access roads would be the same as the No Action Alternative. Access roads previously built for the transmission line are used by the general public on public lands, and thus any increased accessibility and visibility to cultural resources has previously occurred. Since the proposed action would not entail improving the existing road system for the vast majority of its length, secondary impacts resulting from increased public access to cultural resources should not result.

Potential impacts to the two NRHP eligible and recommended sites described above are summarized below in Table 4.2-2. As part of the POD, a number of EPMs would be implemented to avoid and minimize impacts to cultural resources (EPMs 14, 15 and 16)

Potential project related impacts to Site 5DT1546 would be south of Rabbit Gulch, in a portion of the site that is considered to be less sensitive than site components north of Rabbit Gulch. Because this portion of the site is less sensitive, or non-contributing to the site's eligibility, impacts to this portion of the site are not deemed significant, and Tri-State has committed to EPM 7 to avoid potential impacts. Management actions within the non-contributing portion of the site south of Rabbit Gulch will be restricted to existing access roads and the transmission structure pads. The north side of Rabbit Gulch will be avoided.

Table 4.2-2 Potential Impacts to Cultural Sites, Hotchkiss Substation to Spring Creek Tap Transmission Line and Access Roads

Site No.	Site type	Owner	Potential Impacts	
			Access Road use and maintenance	TL Structures
5MN1854	Historic canal	BOR	None	None
5DT1546	Prehistoric	BLM	Roads between and to Structures 209 through 212	210 and 211

Source: Alpine Archaeological Consultants, Inc. 2004.

4.2.8 Farmlands – Prime and Unique

4.2.8.1 Affected Environment

The existing transmission line crosses privately owned irrigated agricultural lands in Delta and Montrose Counties. The majority of irrigated agriculture crossed by the existing ROW occurs from approximately the Spring Creek Tap to north of Falcon Road. Irrigated farmlands crossed by the existing transmission line in this area are shown on Map Exhibits 1 through 3. Irrigated pasture lands are also found on Scenic Mesa and south of the Hotchkiss Substation (Map Exhibits 7 and 9). Soil types and characteristics vary, ranging from prime farmlands producing high quality vegetable crops in the Uncompahgre Valley, to marginal agricultural lands of lesser production and quality in the Peach Valley and Scenic Mesa areas.

4.2.8.2 Environmental Consequences and Mitigation Measures

The implementation of the proposed action would not cause long-term adverse effects to prime or unique farmlands. Existing easements on private lands, where the 115kV transmission line and access roads cross irrigated agricultural land, would remain unchanged. Consequently, there would be no change over the existing conditions, with respect to the types of short-term disturbances that may occur to agricultural lands due to routine maintenance and operation of the transmission line and access roads. Tri-State is not proposing any new access roads in irrigated farmlands and would implement EPMs 1 and 7 to minimize any adverse impacts to agricultural lands and prime farmlands

4.3 BLM Non-Critical Elements Applicable to the Proposed Action

4.3.1 Soils

4.3.1.1 Affected Environment

Soils in the project area primarily derive from Mancos shale and unconsolidated fill in the Uncompahgre River Valley. Soils derived from Mancos shale are typically characterized as highly erodible soils, that when combined with sparse vegetation cover, can produce an estimated ten tons of sediment per acre annually under natural conditions (BLM, 2004). Poorly located and unmaintained roads can produce more sediment, as well as surface disturbing land uses such as OHV use.

4.3.1.2 Environmental Consequences and Mitigation Measures

The proposed action would ensure that the continued operation and maintenance of the existing 115kV transmission line and access roads is conducted in accordance with the BLM's NCA RMP Management Objectives for minimizing impacts and sediment loads due to soil disturbances. The POD shows the existing level of maintenance for access roads used for the 115kV transmission line. The maintenance and upgrading of access roads will stabilize erosion and sedimentation that is currently occurring. In areas where pole replacements or modifications may be required due to age or uprate requirements in the future, soil disturbances would be limited to within 100 feet of the pole sites and pads while soils that are disturbed would be distributed on-site and evenly around pole sites. In addition, EPMs 1, 6, 7, 8, 9, 10 and 22 would ensure that any soil disturbances would reduce the potential for erosion and increased sedimentation to minor levels of impact.

4.3.1.3 BLM Public Land Health Standards – Findings for Standard 1

The BLM Uncompahgre Basin RMP includes direction to achieve and maintain Public Land Health Standard 1:

> **Standard 1:** Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, landform, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.
>
> **Indicators:**
>
> - Expression of rills, soil pedestals are minimal.
> - Evidence of actively eroding gullies (incised channels) is minimal.
> - Canopy and ground cover are appropriate.
> - There is litter accumulating in place and is not sorted by normal overland water flow.
> - There is appropriate organic matter in the soil.
> - There is diversity of plant species with a variety of root depths.
> - Upland swales have vegetation cover or density greater than that of adjacent uplands.
> - There are vigorous, desirable plants.

Finding for Public Land Health Standard 1: With Tri-State's commitment to the mitigation measures in the POD, the proposed action would not impact BLM lands achieving Public Land Health Standard 1.

4.3.2 Vegetation

4.3.2.1 Affected Environment

Vegetation in the project area varies with elevation, precipitation, and soil characteristics. Pinyon-juniper woodland covers the highest elevations, on the ridge west of the Gunnison Gorge. As elevation decreases this type blends into shrublands dominated by big sagebrush, horsebrush and rabbitbrush. This community type covers the lower western slopes of the ridge west of the Gorge, and the mostly private lands on Scenic Mesa east of the Gorge. In the Peach Valley area, the adobes support an arid desert shrubland dominated by mat saltbush on clay ridges and slopes, shadscale and sparse bunchgrasses on gravelly terraces, and greasewood and other saltbush species in drainage bottoms. Some weedy species are present along the ROW, including halogeton, cheat grass, Russian knapweed, tamarisk, and a variety of exotic mustards (see Section 4.2.3 for more information).

On parts of Scenic Mesa private lands, shrubs have been cleared for irrigated pastures. Most of the private lands south of Peach Valley to the Spring Creek Tap are in irrigated agriculture, with small areas of remnant greasewood.

4.3.2.2 Environmental Consequences and Mitigation Measures

For the proposed action, very little tree trimming would be necessary on the existing ROW. In a few areas, maintenance of access roads would require clearing of greasewood and other shrub or herbaceous vegetation that has encroached into roadways. Routine maintenance of other access roads may occasionally disturb small areas of vegetation along road margins. Tri-State is committed to several EPMs in the POD that would minimize vegetation impacts, including:

- Avoidance of unnecessary site disturbance (EPMs 1, 7, 8, and 22);
- Erosion control on maintained access roads (EPMs 6, 7, and 9);
- Limiting routine road maintenance to drier seasons (EPM 7);
- Conserving topsoil when excavation is necessary (EPM 8); and,
- Revegetating disturbed areas to BLM standards (EPM 10).

With these mitigation measures, and because no new access roads would be constructed, little disturbance of existing vegetation would occur, and the proposed action would have minimal impacts on existing natural vegetation.

4.3.2.3 BLM Public Land Health Standards – Findings for Standard 3

The BLM Uncompahgre Basin RMP includes direction to achieve and maintain Public Land Health Standard 3 (healthy and productive plant and animal communities). Definition and indicators for Standard 3 are discussed in Section 4.2.1.3 of this EA. With Tri-State's commitment to the mitigation measures in the POD, the proposed action would not impact BLM lands achieving Public Land Health Standard 3.

4.3.3 Wildlife – Aquatic and Terrestrial

4.3.3.1 Affected Environment

Wildlife in the project area includes a variety of species, mostly those characteristic of lower elevation arid shrublands and agricultural lands. Various aquatic and riparian species are also associated with habitats at the major river crossings.

Big game species include elk, mule deer, bighorn sheep, black bear, and mountain lion. Elk usually occur in the area only in winter. Mule deer are resident along the major rivers and agricultural lands year round, and additional deer migrate into the area in winter. Crucial winter ranges for elk and deer are mapped by CDOW on private lands on Scenic Mesa (see Map Exhibits, Number 7, 8, and 9), as well as on nearby public land parcels. The project area west of the Gunnison Gorge, including most of the BLM land in the project area, provides no substantial winter range for elk or deer.

Bighorn sheep occur in the Gunnison Gorge. CDOW has mapped bighorn sheep overall range within the Gorge at the transmission line span, extending about 1 mile north and several miles south. The nearest mapped bighorn sheep production area begins about 1.5 miles south of the span, and extends further south.

Black bears and mountain lions occur occasionally in the project area. Both species are more typical of higher elevations, but roam into the lower valleys during periods of food shortages or during dispersal. Coyote, red fox, gray fox, badger, raccoon, striped skunk, and bobcat are common smaller predators in this area. Small mammals include a number of species of rabbits, rodents, and bats.

Chukar and Gambel's quail occur in desert shrublands and brushy areas. Pheasants are common in agricultural areas. Common raptors are golden eagle, red-tailed hawk, northern harrier, kestrel, great horned owl, peregrine falcon, and in winter the bald eagle and rough-legged hawk. Bald eagle are discussed in Section 4.2.2.1, Threatened, Endangered, and Sensitive Species. Several golden eagle nest sites are known in the Gunnison Gorge, however none are within 1 mile of the transmission line or designated access roads.

Waterfowl are common along the rivers, and include Canada goose, snow goose and sandhill crane (in migration), mallard, and several other duck species. Great blue herons commonly forage along the rivers and nest in colonies and are sensitive to human disturbance. The nearest great blue heron nesting colony to the project area is along the North Fork of the Gunnison River, about 0.7 miles north of the Hotchkiss substation.

A large number of smaller species of migratory birds occur as breeding residents in summer, winter visitors, or migrants. All migratory species are protected under the federal Migratory Bird Treaty Act.

Several species of reptiles and amphibians occupy the project area. Most amphibians and some reptiles are associated with riparian habitats. Fish in the project area are mostly confined to the Uncompahgre and Gunnison rivers, and include introduced trout and several smaller species of native and introduced fish.

4.3.3.2 Environmental Consequences and Mitigation Measures

Potential impacts of the proposed action to wildlife were discussed in Section 4.2.1, Migratory Birds and Section 4.2.2, Threatened, Endangered, and Sensitive Species. In summary, direct mortality of wildlife from maintenance or construction activities would be very rare and not likely to impact populations of any wildlife species. A slight risk of bird mortality from collision with conductors also exists. No bird collision mortalities have been recorded from the existing line, and the proposed action would not substantially increase the risk of bird collisions.

Other direct impacts due to disturbance of animals could occur during maintenance or construction work, as discussed in Section 4.2.2.2. Such disturbances would normally cause no impact, or only brief and temporary displacement of wildlife; however, human disturbance near nesting raptors can cause nest abandonment or decreased nest success (Postovit and Postovit 1987). With Tri-State's commitment to mitigation measures in the POD to avoid routine maintenance or construction work within ½ mile of active raptor nests (EPM 18), potential adverse impacts to nesting raptors would be minimized. No eagle nest sites are known within 1 mile of the ROW. A red-tailed hawk nest was active in 2004 on a short cliff about 170 feet west of structure 198 (BIO-Logic Environmental 2004). Nests of red-tailed hawk or great horned owl are possible in the riparian areas along the Uncompahgre and Gunnison Rivers and in Peach Valley. Nests of northern harrier, kestrel, and other small common raptors may occur on private agricultural lands near the ROW.

Wintering mule deer and elk are also vulnerable to human disturbance, because animals are in depleted body condition and extra energy expenditure caused by human disturbance can increase winter mortality or decrease reproductive success in the following season (Wisdom and Cook 2000, Kie and Czech 2000). No crucial big game winter ranges occur on BLM lands near the project ROW. Adverse impacts to wintering big game on Scenic Mesa private lands would be mostly avoided because routine maintenance work would normally be scheduled outside the winter months. Emergency repairs could require occasional human disturbance to wintering big game, but these occurrences are likely to be rare, and any adverse impacts would correspondingly be minimal.

Indirect impacts to wildlife from habitat damage or destruction, as discussed in Section 4.2.2, would be very minimal and confined to small areas. No habitat modification actions would be likely to cause a measurable impact to any wildlife species in the project area, on BLM or private lands.

4.3.3.3 BLM Public Land Health Standards – Finding for Standard 3

The BLM Uncompahgre Basin RMP includes direction to achieve and maintain Public Land Health Standard 3 (healthy and productive plant and animal communities). Standard 3 definition and indicators are provided in Section 4.2.2.3 of the EA. With Tri-State's commitment to the mitigation measures in the POD, the proposed action would not impact BLM lands achieving Public Land Health Standard 3.

4.3.4 Land Use and Recreation

4.3.4.1 Affected Environment

The existing 115kV transmission line crosses public lands that are within the designated Gunnison Gorge National Conservation Area (NCA). The NCA RMP (November 2004) identifies three management areas that are crossed by the existing transmission line ROW: 1) Management Unit 2 – Flat Top-Peach Valley OHV Recreation Area; 2) Management Unit 3 – Gunnison and North Fork Rivers Special Recreation Management Area (SRMA); and 3) Management Unit 6 – Other Public Lands. The RMP contains the management objectives common to all planning areas on Table 2-2.0 (pages 2-8 through 2-29), with Management Unit Objectives and Unit Recreation Management Zone Decisions contained as follows: Unit 2 - Tables 2-2.2 and 2-2.2a (pages 2-49 through 2-63), Unit 3 - Tables 2-2.3 and 2-2.3a (pages 2-64 through 2-78), and Unit 6 - Tables 2-2.6 and 2-2.6a (pages 2-92 through 2-102). In general, the

RMP allows limited OHV use on designated routes, except portions of Unit 2, where OHV use is open. RMP Figure 2-4 (page 2-109) shows the routes open to OHV use.

The RMP also designates several ROW corridors, generally one-half mile in width. RMP Table 2-3 (page 2-103) lists the recommended Utility Corridors on Public Lands, and Figure 2-2 (page 2-105) shows the corridor locations. Utility Corridor 1 encompasses portions of Management Units 2, 3 and 6, and contains part of Tri-State's 115kV transmission line.

4.3.4.2 Environmental Consequences and Mitigation Measures

The proposed action will not conflict with any of the provisions of the NCA RMP, including recreational use and utility corridors. No additional or increased conflicts with recreational OHV use are anticipated, as the transmission line access roads designated for OHV use are considered to be compatible joint uses and will remain open (EPM 11). Minor short-term impacts to recreation would result only on an occasional and intermittent basis. These types of short-term impacts would result only if OHV activity was temporarily affected by the movement of Tri-State vehicles and maintenance equipment on public land access roads also open to OHV activities.

The conformity of the proposed action with the RMP is discussed in Section 3.0 of this EA. The existing transmission line has been addressed in a number of the RMP decisions, and contains provisions for the BLM to cooperate with Tri-State in meeting the terms of the existing ROW Grant in the proposed authorization under FLPMA. The POD similarly contains a number of EPMs to ensure that the maintenance and operation of the 115kV line meets the BLM's Public Lands Health Standards and NCA RMP objectives.

4.3.5 Visual Resources

4.3.5.1 Affected Environment

BLM Administered Public Lands. The existing 115kV transmission line crosses 12.1 miles of BLM administered public lands that have been designated Visual Resource Management System (VRM) classes. Public lands crossed by the transmission line have been designated as VRM Classes III and IV in the NCA RMP (BLM, November 2004), as follows:

- **VRM Class III** – VRM Class III pertains to the majority of the ROW crossing Management Unit 3 and portions of Management Units 2 and 6. The objective of VRM Class III is "to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the causal observer."(BLM, 1986)

- **VRM Class IV** – VRM Class IV pertains to most of the ROW across Management Unit 6 and portions of Management Unit 2. The objective of VRM Class IV is "to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention." (BLM, 1986)

Private Lands. Visual resource values also pertain to private lands, although local counties have not designated lands for visual resource management, similar to BLM's VRM system. Landscapes with scenic values include the Uncompahgre River, wetlands and riparian areas, and

pastoral agricultural and rural settings that provide scenic views to surrounding mountains including Grand Mesa to the north and the San Juan Mountains to the south.

4.3.5.2 Environmental Consequences and Mitigation Measures

The proposed action (authorization of the transmission line and access roads under FLPMA) would not cause significant adverse visual changes to the landscape or transmission facilities; and would meet the BLM's VRM objectives for public lands. Similarly, there would be little to no visual change to the existing transmission facility on private lands. Based on the POD, the following types of short-term and long-term visual changes could result from the proposed action:

- The existing 115kV transmission line would continue to be in operation for the foreseeable future. Visibility of the existing wood poles, conductors and hardware would largely continue as seen today.

- The on-going maintenance of the transmission line may require either the replacement of existing wood H-frame poles, or the intermittent addition of three pole dead-end structures approximately every five miles for increased stability. New replacement structures would be located in the same or similar positions as the existing wood H-frame structures that would be removed. Similar materials and structure designs would be used. If new three pole dead-end structures need to be added for stability, these would be placed along the existing transmission line centerline, at approximately 5 mile intervals. Consequently, the visual contrasts in line, form, color and texture caused by the change or addition of structures and hardware would be very weak or imperceptible. These long-term visual changes would occur on BLM lands designated as VRM Class III or IV landscapes, where these types of contrasts meet the degree of visual change allowed. No existing 115kV structures are currently within the BLM's VRM Class II landscapes along the Gunnison River, and, therefore, no impacts to landscapes with VRM Class II would occur.

- No major new access roads would be constructed on public lands. Improvements to existing access roads would occur when, and where, necessary to meet the POD Maintenance Level 1 standards. Short spur roads to new structure sites may also be required in the future. The degree of visual change that the access road improvements would cause would be weak in degree and would be consistent with the degree of visual change allowed on public lands with VRM Class III and IV designations.

- If new dead-end structures need to be installed along the transmission line centerline, access to these sites would be via the existing access road, if feasible. If new access roads are required for the installation of additional structures in the future, these would be reviewed and authorized by BLM at that time.

- Minor soil disturbances would also occur at pole sites, where existing poles require replacement due to age and deterioration. Weak visual contrasts in color and texture elements may result in these areas due to increased soil/vegetation disturbances. These types of visual changes would easily meet the allowable changes under VRM Classes III and IV. No access roads are within the VRM Class II landscapes, nor would be directly affected by this proposed action.

- The existing 115kV line may need to be uprated at some point in the future. This action may require the height of the existing structures to be increased up to 20 feet to provide adequate conductor clearances. The existing conductor may also be replaced with a new conductor of increased diameter. Some new structures may also need to be installed. The visual contrasts in line, form, color, and texture would be weak to moderate, compared to the existing 115kV transmission line; and would meet BLM's VRM Class III and IV objectives for lands crossed by the transmission line ROW. Class II landscapes would not be directly affected by uprating the transmission line, since no structures or access roads are, or would be, located at the river crossing, which lies a hundred feet below the transmission line.

4.3.6 No Action Alternative

Compared to the proposed action, the No Action Alternative would have similar or greater impacts to sensitive natural, biological, cultural and visual resources since the existing 115kV transmission line would continue to be operated and maintained in accordance with the original public land authorization granted in 1967. The authorization and easement do not specifically provide for the management practices contained in the BLM's RMPs for the Uncompahgre Basin (1986) and the recently approved Gunnison Gorge NCA (November 2004). Continued reliance on the previously granted authorization would not bring the operation and maintenance of the transmission line in compliance with the BLM's UBRMP or the NCA RMP. While Tri-State would continue to maintain and operate the existing transmission line in compliance with all federal and state environmental laws and regulations, the transmission line would not be subject to all the EPMs described in Table 1.2-3 of this EA. Under the No Action Alternative, this condition would continue until 2017, when new authorizations, or removal, of the transmission line would be required. Under this scenario, the removal of the transmission line in the future would necessitate the replacement of a similar facility in another location. Thus, the No Action Alternative does not have the potential to avoid environmental impacts associated with the proposed action.

4.3.7 Cumulative Impacts

The proposed project would contribute to the past, present, and future cumulative environmental effects of other federal, state, local, and private actions in the area. Cumulative effects to the environment could result from the proposed action in conjunction with:

- BLM-permitted livestock grazing;
- BLM-permitted recreational uses including OHV, non-motorized recreation, motorized river access, fishing in the Gunnison Gorge, and hunting;
- Agricultural, residential, and recreation uses of private lands; and,
- CDOW fisheries management, Uncompahgre and Gunnison Rivers.

BLM-permitted actions on BLM lands in the project area are directed by the Gunnison Gorge National Conservation Area (NCA) Management Plan, which amended the Uncompahgre Basin RMP in 2004. Under the NCA Management Plan, BLM-permitted actions were analyzed for potential adverse impacts to the environment, including impacts to soils, water resources, land uses, biological, cultural, and visual resources, among others. The RMP sets forth management direction specified to avoid or minimize adverse impacts on a cumulative basis. Therefore, the proposed project does not have the potential to contribute to potentially significant cumulative effects on public lands.

Private land management, particularly surface-altering actions to support agriculture and residential development, are likely to have various impacts to most wildlife, some adverse and some beneficial. Most of the private land in the project area on Scenic Mesa is within the Scenic Mesa Ranch, and is managed for both agriculture and commercial wildlife use (upland bird hunting). Most other private lands in the project area, including parts of Peach Valley and the Uncompahgre Valley, are managed for agricultural, residential, or commercial uses. No potentially significant cumulative impacts have been identified that would result from the continued operation and maintenance of the 115kV transmission line in conjunction with these past, present, and future land use trends.

5.0 References and Consultations

Armstrong, D.M., R.A. Adams, K.W. Navo, J. Freeman, and S.J. Bissell. 1984. Bats of Colorado: Shadows in the Night. Colorado Division of Wildlife, Denver.

Andrews, R., and R. Righter. 1992. Colorado Birds: A Reference to Their Distribution and Habitat. Denver Museum of Natural History, Denver, CO.

Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C.

Avian Power Line Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Edison Electric Institute, Washington, D.C.

BIO-Logic Environmental. 2004. Biological Survey Report 2004: Tri-State Generation and Transmission Association, Inc., Spring Creek-Hotchkiss 115 kV Transmission Line. Report Submitted to Tri-State Generation and Transmission Association, Inc., Denver, Colorado.

Buckhorn Geotech. January 2005. Personal communications with Laurie Hauptmann.

Cypher, B.L., and G.D. Warrick. 1993. Use of Human-Derived Food Items by Urban Kit Foxes. Transactions of the Western Section of the Wildlife Society 29:34-37.

Federal Emergency Management Agency. 1984. Flood Insurance Rate Maps. Montrose, County, Colorado.

Fitzgerald, J. P. 1996. Status and Distribution of the Kit Fox (*Vulpes macrotis*) in Western Colorado. Final Report. Project No. W-153-R-7. Colorado Division of Wildlife, Denver.

Gelatt, Patty (USFWS Grand Junction Field Office), July 22, 2003. Personal communication with Dawn Reeder, BIO-Logic Environmental, regarding determinations of effects on Colorado River endangered fish species.

Hammerson, G.A. 1999. Amphibians and Reptiles in Colorado, Second Edition. University Press of Colorado, Boulder, and Colorado Division of Wildlife, Denver.

Kie, J.G., and B. Czech. 2000. Mule and Black-tailed Deer. Pages 629-657 *in* S. Demarais and P.R. Krausman, editors. Ecology and Management of Large Mammals in North America. Prentice Hall, Upper Saddle River, New Jersey.

Kingery, H.E., Editor. 1998. Colorado Breeding Bird Atlas. Colorado Bird Atlas Partnership and Colorado Division of Wildlife, Denver.

Lyon, Peggy. 2004. Personal Communications, Western Colorado Field Director, Colorado Natural Heritage Program.

McGuire, Jack. 2004. Cultural Resource Inventory for Tri-State's Spring Creek to North Mesa Hotchkiss 115 kV Transmission Line Project in Montrose and Delta Counties, Colorado. Alpine Archaeological Consultants, Inc., Montrose. Prepared for Tri-State Generation & Transmission Association, Inc., Denver. On file at the Colorado Historical Society, Office of Archaeology and Historic Preservation, Denver.

O'Farrell, T.P. 1987. Kit Fox. In Wild Furbearer Management and Conservation in North America, edited by M. Novak, J. A. Baker, M. E. Obbard and B. Malloch. Ontario Trappers Association, Ottawa, Ontario, Canada.

Postovit, H.R., and B.C. Postovit. 1987. Impacts and Mitigation Techniques. Pages 183-213 *in* B.A. Giron Pendleton, B.A. Milsap, K.W. Cline, and D.M. Bird, editors. Raptor Management Techniques Manual. National Wildlife Federation, Washington, D.C.

U.S. Department of Interior, Bureau of Land Management. November 2004. Approved Resource Management Plan and Record of Decision, Gunnison Gorge National Conservation Area. Delta and Montrose Counties, Colorado.

U.S. Department of Interior, Bureau of Land Management. January 2004. Proposed Resource Management Plan and Final Environmental Impact Statement. Gunnison Gorge National Conservation Area. Delta and Montrose Counties, Colorado.

U.S. Department of Interior, Bureau of Land Management. July 1989. Uncompahgre Basin Resource Management Plan and Record of Decision.

U.S. Fish and Wildlife Service (USFWS). 1988a. Clay-loving Wild Buckwheat (*Eriogonum pelinophilum*) Recovery Plan, with 1991 Update. U.S. Fish and Wildlife Service, Denver, Colorado.

U.S. Fish and Wildlife Service (USFWS). 1988b. Black-footed Ferret Recovery Plan. U.S. Fish and Wildlife Service, Denver, Colorado.

U.S. Fish and Wildlife Service (USFWS). 1989. Black-footed Ferret Survey Guidelines for Compliance with the Endangered Species Act. U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

U.S. Fish and Wildlife Service (USFWS). 1990. Uinta Basin Hookless Cactus (*Sclerocactus glaucus*) Recovery Plan. U.S. Fish and Wildlife Service, Denver, Colorado.

U.S. Fish and Wildlife Service (USFWS). 1994. Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback Sucker, Colorado Squawfish, Humpback Chub, and Bonytail Chub. Federal Register 59(54): 13374-13400.

U.S. Fish and Wildlife Service (USFWS). 2004. Federally Listed and Proposed, Endangered, Threatened, Experimental, and Candidate Species and Habitat in Colorado By County, updated August 2004. Available online: http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO082003.htm, accessed November 30, 2004.

Wisdom, M.J., and J.G. Cook. 2000. North American Elk. Pages 694-735 *in* S. Demarais and P.R. Krausman, editors. Ecology and Management of Large Mammals in North America. Prentice Hall, Upper Saddle River, New Jersey.

Woodling, J. 1985. Colorado's Little Fish: A Guide to the Minnows and Other Lesser Known Fishes in the State of Colorado. Colorado Division of Wildlife, Denver.

6.0 List of Preparers

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U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
CO-150

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CO-150-2005-27 EA

The environmental assessment that analyzed the environmental effects of the proposed action has been reviewed. The approved mitigation measures result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

RATIONALE: The no significant impact determination is based on the following:

- The environmental analysis predicts only impacts of small magnitude may occur as part of the action analyzed.

- Comprehensive and effective mitigation measures will be implemented. These mitigation measures are designed to minimize impacts associated with the use and maintenance of the transmission line and access road system.

- After application of these mitigation measures, it is predicted that environmental disturbances will not be of significant scale in terms of context and intensity.

DECISION RECORD

DECISION: It is my decision to implement the proposed action which is to issue a right-of-way (ROW) to Tri-State Generation and Transmission Association (Tri-State) for the Montrose-Hotchkiss 115kV transmission line and associated access roads. The proposed action consists of reauthorizing the existing transmission line and includes the existing maintenance access roads. My decision includes the adoption of Tri-State's proposed environmental protection measures as mitigation to reduce impacts of the proposed action to the extent possible. This portion of Tri-State transmission system crosses approximately 12.1 miles of federally administered lands. The length of existing access roads used to operate and maintain the line is 18.3 miles. The access roads being authorized are currently in use and have served line maintenance operations since the line was constructed in 1968. No new access roads will be constructed. The ROW will be authorized under the Federal Land Policy and Management Act. In accordance with the Memorandum of Understanding between Tri-State and BLM signed November 10, 2003, as part of the Gunnison Gorge NCA RMP planning process, the ROW will be granted in perpetuity. The ROW will be made subject to the attached stipulations which include the Plan of Development.

RATIONALE: Tri-State is required to provide wholesale power to their member utilities. Tri-State's 115 kV transmission line is an important component of energy delivery to rural Colorado. The decision will reauthorize the existing transmission line and include the existing maintenance access roads.

The proposed action alternative will yield greater environmental protection than the no action alternative.

Environmental benefits of my decision are:

- Routine road and transmission line maintenance can be scheduled during times when activity will have the least impact on wildlife in the area.

- Under current conditions, unscheduled emergency trips sometimes occur during wet periods when more environmental impact is possible. Under the proposed action, scheduled maintenance will reduce the need for emergency maintenance trips and can be accomplished during dry periods.

- The proposed road maintenance will correct drainage problems along existing roads and thus reduce further surface degradation from erosion and weathering processes.

- Stabilization of soil along access roads can occur in areas where it is feasible to have grasses growing in the ROW and soil characteristics favor low growing grasses. This is the most desirable situation, to have the road surfaces covered with grasses, low vehicle use in terms of numbers, and properly functioning drainage features.

- Including the access roads in the ROW will provide for environmental protections during maintenance activities and control the timing of such activities.

- Surface protection measures and transmission line maintenance can proceed in a timely manner when needed.

Public benefits related to my decision are:

- The permitted access road will make it possible for routine line maintenance to occur, thus reducing power disruptions and improving reliability and service to consumers.

- Routine road and line maintenance will also reduce the risk of future black outs to Tri-State's service area.

- In the future, Tri-State will be able to more efficiently and economically maintain the transmission line and associated access roads by reducing exposure to numerous costly and disruptive emergency maintenance events.

FEDERAL AGENCY EFFICIENCIES:

This ROW reauthorization streamlines the federal processes of the BLM. Originally, the 115 kV line was issued under the authority of the Act of March 4, 1911, and assigned ROW serial number COC-1534. The grant did not include the associated maintenance access roads. The proposed action will reauthorize the existing line under FLPMA and include the access roads. The old ROW authorization will be relinquished.

MITIGATION MEASURES: Environmental protection measures have been identified in the EA and incorporated into the Plan of Development which will be made a part of the ROW. The Plan of Development is designed to be updated as needed, to include new resource information.

COMPLIANCE/MONITORING: Completion of the EA meets the requirements of the National Environmental Policy Act to authorize land use. The BLM will monitor the ROW for compliance with the terms and conditions of the ROW.

NAME OF PREPARER: Teresa Pfifer

DATE: 6-22-06

NAME OF ENVIRONMENTAL COORDINATOR: Amanada Clements

DATE: 7-10-06

SIGNATURE OF AUTHORIZED OFFICIAL: Barbara L. Sharrow
Uncompahgre Field Office Manager

DATE SIGNED: 7-27-06

ATTACHMENTS:
Maps
Legal Description
Stipulations

Exhibit A
COC-68283

STIPULATIONS

1. The holder shall contact the Authorized Officer at least two days prior to the anticipated start of construction and/or any surface disturbing activities. The Authorized Officer may require and schedule a preconstruction conference with the holder prior to the holder's commencing construction and/or surface disturbing activities on the right-of-way. The holder and/or his representative shall attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, shall also attend this conference to review the stipulations of the grant. The BLM authorized representative is Danna Knox, Environmental Protection Specialist, and she can be reached at the Uncompahgre Field Office, 2505 South Townsend, Montrose, Colorado 81401 or phone at (970) 240-5304. Alternate contact is Teresa Pfifer, BLM, and she can be reached at (970) 240-5316.

2. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the Plan of Development dated June 2006 attached hereto as Appendix 1 and is incorporated herein. Any relocation, additional construction, or use that is not in accord with these approved conditions shall not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including the Plan of Development shall be made available on the right-of-way area during construction and maintenance activities. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health or the environment.

3. The holder shall maintain the right-of-way in a safe and useable condition. If the holder's scope of use exceeds the standards defined herein, then the holder shall apply for an amendment to the right-of-way in order to provide for such an upgrade in standard, as determined by the Authorized Officer.

4. Prior to the use of herbicides, the holder will obtain from the Authorized Officer written approval of a plan showing the type and quantity of material to be used, method of application, location of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer. Emergency use of herbicides shall be approved in writing by the Authorized Officer prior to such use.

5. The Authorized Officer may suspend or terminate in whole, or in part, any construction or maintenance activities, when in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

6. On an annual basis, the holder will provide the authorized officer with their scheduled maintenance plan, by letter, as provided in the Plan of Development (POD). The level of maintenance is clearly defined in the maps included in the POD.

7. The BLM archaeologist will determine if the proposed maintenance would impact any sites eligible or potentially eligible (need data) for inclusion on the National Register of Historic Places (NRHP). The agency archaeologist will then consult with the holder to

determine if it is feasible to avoid these sites. If avoidance is feasible, then the holder will retain a qualified archaeologist to flag the site boundaries of these cultural resource sites. The holder and its contractors will avoid disturbance within these flagged boundaries. If avoidance is not possible, and if it is necessary to perform maintenance activities within any of the identified eligible or potentially eligible site boundaries, the holder will retain a qualified archaeologist to develop a mitigation plan in coordination with the BLM archaeologist. The BLM archaeologist will then conduct consultation with the State Historic Preservation Officer and appropriate Native American Tribes regarding the mitigation plan. After an acceptable mitigation plan is developed and implemented, the holder can proceed with the scheduled maintenance in accordance with the POD.

8. The holder shall seed all disturbed areas with Bottlebrush Squirreltail at 4 pounds per acre and Western Wheatgrass at 4 pounds per acre drilled rate. This rate shall be doubled if broadcast and raked in. The seed shall be certified weed free. Seeding shall be repeated until a satisfactory stand has been reestablished as determined by the authorized officer.

9. The facility authorized herein shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines," Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle safe." Such proof shall be provided by a raptor expert approved by the authorized officer. The BLM reserves the right to require modifications or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

10. If in the event the holder determines to terminate the right-of-way, the holder shall contact the Authorized Officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable termination and rehabilitation plan as necessary. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surface material, recontouring, topsoiling, or seeding, as determined necessary. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.